

Additional chart coverage may be found in CATP2, Catalog of Nautical Charts.

SECTOR 1 — CHART INFORMATION

SECTOR 1

NORTH AND WEST COASTS OF LUZON, INCLUDING LUZON STRAIT

Plan.—This sector describes the islands, channels, and dangers of the Luzon Strait lying between the S extremity of Taiwan and the N coast of Luzon. This is followed by a description of the N and W coasts of Luzon and off-lying dangers from Escarpada Point to Cape Santiago including Lingayen Gulf, Subic Bay, and Manila Bay. The arrangement of the sector is from N to S and E to W.

General Remarks

1.1 The channels leading through Luzon Strait are wide and deep and may be used by all classes of vessels. The Luzon Strait contains two groups of islands, the Batan Islands and the Babuyan Islands. The Batan Islands group is separated from the S extremity of Taiwan by Bashi Channel and from the Babuyan Islands by Balintang Channel. Babuyan Channel separates the Babuyan Islands from the N coast of Luzon.

The N coast of Luzon between Escarpada Point and Cape Bojeador, about 96 miles W, is high and rugged at its NE and NW ends. The Cagayan River flows into the sea about 37 miles WSW of Escarpada Point. The port of Aparri is located on the E side of the mouth of the Cagayan River. The coast on either side of the mouth of the river is low and sandy for distances up to 30 miles.

The W coast of Luzon consists of irregular masses of hills and mountains and is prominently indented by Lingayen Gulf, Subic Bay, and Manila Bay. Volcanoes are the most conspicuous features of the landscape, but there is little volcanic activity.

Winds—Weather.—On the N coasts of Luzon, the winter monsoon is experienced from about October to March. During this time the winds blow from N to NE, but occasionally they blow from the NW. As a rule, NW winds are stronger and are often accompanied by cloudy weather and rain.

In April, land and sea breezes are well marked, and from June to September, S winds prevail. Squalls, accompanied by thunder and lightning are frequent in summer.

On the W coast of Luzon N winds predominate during November to January, and E winds February to April. Southeast winds are nearly as prevalent as E winds.

Under the land, during the regular course of the wind, calms are frequent and often a light wind blows from the W, while in the front of the open channel it blows hard, especially off Cape Calavite.

For the six months from May to October, the prevailing wind is SW. May is the month in which the winds veer from E to SW, while October is the month of change from SW to the N.

The NE gales off the W coast of Luzon are generally associated with a rise of the barometer and bright clear weather. Cloudier skies are often found farther to the N.

The Northeast Monsoon decreases in strength from February to April, and the winds tend to become more to the E. During this monsoon the wind usually backs to the NNE or N during

the day under the influence of the sea breeze, but sometimes calms or W breezes are experienced between 1000 and sunset.

During May, the wind is mostly light and variable, but strong S or SW winds may occur in Manila Bay.

The Southwest Monsoon is deviated by the land and sea breezes even more than is in the Northeast Monsoon.

Tides—Currents.—Tidal currents through Luzon Strait set in a general W direction on the rising tide, and E on the falling tide. They attain a maximum rate of 5.5 knots at the NE and SW ends of the Batan Islands group.

Tidal currents among the islands are greatly confused. Inshore and offshore tidal currents are frequently opposite in direction under similar tide and weather conditions. Strong eddies and races are found near the islands and shoals.

During the Southwest Monsoon, a N current, with a rate of 1 to 3 knots in open areas, is reported to prevail in Luzon Strait. Near the islands this current is diverted, and in the channels between the islands it becomes erratic. During this period the current can be expected to flow in a NE direction, but it is not constant and should the wind be light or moderate, it is liable to set in various directions.

During the Northeast Monsoon, the current sets in a general W direction through Luzon Strait.

1.2 O-luan Pi (21°54'N., 120°51'E.), the S extremity of Taiwan, is the usual landfall for vessels bound N from the Philippine Islands. It is a low headland and shows a light. A rock lies close off the E extremity of the headland.

Ch'i-hsing Chiao (21°46'N., 120°49'E.), about 8 miles S of O-luan Pi, are a group of rocks about 1 mile in extent, lying above and below-water. The sea breaks heavily over these rocks in bad weather. The channel between O-luan Pi and these rocks is clear of dangers, but heavy rips and swirls are often experienced throughout the channel.

There are numerous shoals within a radius of 8 miles centered about 40 miles S of O-luan Pi. The area includes two banks, with depths of less than 92m. A depth of 13m lies in the center of the area.

A detached shoal, with a depth of 24m, lies about 26.5 miles SSW of O-luan Pi. A shoal, with a depth of 15.8m, lies about 17 miles WSW of Ch'i-hsing Chiao.

Bashi Channel (21°30'N., 121°45'E.), frequently used as a main shipping route, is a wide and deep channel between **Hsiao-lan Yu** (21°57'N., 121°36'E.) and the Batan Islands, 53 miles SSE.

Kao-t'ai Shih (21°44'N., 121°37'E.), 0.1 mile in diameter and steep-to, with a least depth of 2.7m, lies about 13.5 miles S of Hsiao-lan Yu.

At LW, the sea probably breaks on the rock, but the vicinity is generally covered by violent tide rips and swirls, which extend about 45 miles W. As these indications are not always present, Kao-t'ai Shih should be given a wide berth. A dangerous wreck lies on the N side of the rock.

A narrow bank, with a least depth of 10m, lies between 8 miles SW and 12.5 miles S of Kao-t'ai Shih. This bank is sometimes marked by discolored water. Breakers have been reported in the vicinity of the NW part of this bank.

Batan Islands

1.3 The Batan Islands (20°55'N., 121°55'E.), situated in the middle of Luzon Strait, form a chain of islands and islets extending 52 miles in a N to S direction. The larger islands are high and of volcanic origin. The smaller islands are generally low and of coral formation. Earthquakes are frequent and typhoons are extremely severe in this area.

It should be noted that the tidal currents in the vicinity of the islands are both strong and confused. Their direction is affected by the configuration of the channels as well as by the changing monsoons. The islands should be given a wide berth.

Amianan Island (21°07'N., 121°57'E.) is the N island of the Batan group. Tide rips and breakers occur off the NE side of the island. A light is shown on the N side of the island. It is visible only between the bearings of 200° W through 310°. An islet lies about 0.4 mile W of the S extremity of the island and another islet lies close E off its NE side.

Detached shoals, with depths of 22 and 53m, lie, respectively, about 5.5 and 1.75 miles NNW of Amianan Island.

North Island (21°04'N., 121°56'E.) lies about 2 miles S of Amianan Island. The island is high and steep, except off its E side where three rocks, one of them 41m high, lie within 0.2 mile off the shore. An above-water rock lies off the W extremity of the island and a rock, 1.8m high, lies about 0.2 mile off the NE extremity of the island. The channel between the two islands is free of dangers and has a least depth of 48m in the fairway. The currents are strong in the vicinity of the two islands.

1.4 Mabudis Island (20°56'N., 121°55'E.) lies 8 miles S of North Island. It is high and steep, with a reef containing some above-water rocks extending nearly 0.5 mile NE from the N side of the island. The channel between the two islands is wide and deep, except for a 10.5m shoal area lying nearly in mid-channel. This shoal is a narrow ridge of sand that lies about 4.5 miles NNW of the N extremity of Mabudis Island. Except at slack water, heavy tide rips occur near the edge of the bank. Tidal currents over the bank occasionally reach 5 knots.

Siayan Island (20°54'N., 121°54'E.) is joined to Mabudis Island by a ridge of detached rocks and foul ground. Siayan is surrounded by tide rips, and the S and SE sides of the island are foul to a distance of about 0.5 mile. A shoal, with a depth of 24m, lies about 1.5 miles SE of the island.

Itbayat Island (20°46'N., 121°50'E.) is the largest island of the group, and lies 4.5 miles SSW of Siayan Island.

Mount Santa Rosa, the highest peak on the island, stands near the N end of the island. It rises to a height of 277m.

Mount Riposet rises to 229m, standing on the SE part of the island. The coasts of the island are formed by steep rugged cliffs. There are no protected anchorages.

There are four places where landings can be made in good weather. On the E coast, a landing can be made about one mile NE of Mount Riposet. On the SW coast, landings may be made

at Mauyen, close W of the S tip of the island. In the NW part of the island, landings can be made at Mayan, 3 miles SSW of the N end of the island and at a position about 0.75 mile farther S.

Diogo Island (20°42'N., 121°56'E.) lies about 4 miles E of Itbayat Island; the island is of volcanic origin. A reef fringes the island up to a little over 0.25 mile offshore.

There are several islets and rocks off the coasts of the island. A small bank, with a least depth 16.5m, lies about 5.5 miles SE of Diogo Island. The channel between Diogo Island and Itbayat Island is deep and clear of dangers, but the currents are reported to be strong.

Batan Island (20°25'N., 121°57'E.) lies about 16 miles SE of Itbayat Island. The island is the second largest of the group and the most important. The island is mountainous and has several broad cultivated spots.

Mount Irada, which appears to be an inactive volcano, stands at the NE end of the island. It rises to a height of 1,009m.

Tumarun Rock lies about 0.2 mile off the NE coast of the island. A radar conspicuous wreck lies 1 mile NW of the rock. A light is shown from the SE side of Batan Island.

The W side of the island is indented by Baluarte Bay, which is small in area and open to the W. A reef, with depths of less than 5.5m, lies 0.15 mile offshore in places.

The E side of the island is indented by Balugan Bay, which is open to the E. The S entrance point to the bay consists of a prominent black bluff.

Anchorage.—Vessels with local knowledge can take anchorage in Baluarte Bay off the town of Basco, in a depth of about 24m, coral and sand. Smaller vessels can anchor further in, in a depth of 10m, fine sand. The holding ground is good, but the bay gives protection only from the Northeast Monsoon.

Unprotected anchorage can be taken off the settlement of Mahatao. The church tower in the settlement is prominent from the anchorage.

Vessels with local knowledge can take temporary anchorage off San Vicente (Pugo Moro), and off a settlement which lies about 0.75 mile SSW of San Vicente.

These anchorages are confined and unsafe, except during E winds.

With local knowledge, open anchorage can be obtained off Uyugan, in a depth of 14.6m, with the church which is partly obscured by trees, bearing 045°. Some of the bays on the E side of Batan Island are reported to afford protection during the Southwest Monsoons.

Balugan Bay affords sheltered anchorage during the Southwest Monsoon. Vessels anchor here when it is too rough to call at Basco.

1.5 Basco (20°27'N., 121°58'E.) ([World Port Index No. 57970](#)), the principal town on Batan Island, is located at the head of Baluarte Bay, 2.5 miles WSW of the summit of Mount Irada. The church and government buildings, with white walls and red roofs, are prominent.

A pier projecting from the NE side of Baluarte Bay has a berthing space of 18m at its head and alongside depths of 3 to 4m. A light is shown from the cliff close NW of the root of the pier. There are no pilots, but persons with local knowledge may be employed as pilots.

Off-lying banks, with least depths of 46 and 125m, lie 6 miles W and WNW, respectively, of Batan Island. Banks, with

least depths of 91 and 137m, lie 29 and 23 miles W, respectively, of Batan Island.

Sabtang Island (20°18'N., 121°52'E.) lies about 2.5 miles SW of the SW extremity of Batan Island. A coral reef closely fringes the island, except at a few locations where the cliffs are at the water's edge. A detached rocky ledge, with a depth of 1.8m, lies about 1.25 miles N of **Natao Point** (20°21'N., 121°51'E.), the N extremity of the island. Another detached rocky ledge, with a depth of 3m, lies about 1 mile N of Natao Point. A light is shown from Sabtang Island.

It was reported that a shoal, with a depth of 17m, lies about 4 miles SW of the S end of the island. A bank, with a depth of 123m, lies about 3 miles SE of Sabtang Island.

The principal settlement stands on the NE side of the island. The coastal reef extends nearly 0.1 mile offshore from the settlement. The church and some buildings with red roofs stand in the settlement and are conspicuous from offshore.

During the Southwest Monsoon, good sheltered anchorage can be found off the settlement, in depths of 18 to 22m, sand, with the church bearing 225°. A light (20°20.5'N., 121°52.2'E.) is shown from the town.

Ibuhos Island (20°19'N., 121°49'E.) lies about 1.25 miles W of the W side of Sabtang Island. The island is small and low, with a hill on its S end. A stranded wreck lies on the NW side of the island.

The channel between the island and Sabtang Island is about 0.75 mile wide at its narrowest part between the reefs on each side, and has depths of 18 to 40m in the fairway.

The flood current sets S through the channel at a maximum rate of 3 to 4 knots, and the ebb sets N at the same rate.

Dequey Island (20°20'N., 121°47'E.) lies 0.5 mile W of the NW extremity of Ibuhos Island. The channel between the two islands is about 0.25 mile wide. Depths of 20 to 26m are found in the fairway. Strong rips set N along the SW side of Dequey Island.

1.6 Balintang Channel (19°55'N., 121°50'E.), frequently used as a main shipping route, is a wide, deep channel between the Batan Islands and the Babuyun Islands, 42 miles S.

Unusual sets have been experienced in the channel in the vicinity of the islands. An isolated depth of 11.6m was reported to lie in the W approach to the channel, in position 20°12'N, 120°44'E.

Balintang Islets (19°58'N., 122°09'E.) are an isolated group of several small, sharp peaked, rocky islets that lie in the E part of Balintang Channel. The westernmost islet is the largest of the group. Within a distance of about 0.75 mile SE of this islet are three islets or rocks, 13, 23, and 36m high, respectively.

Two islets, 85 and 103m high, lie, respectively, 1 and 0.75 mile E of the larger islet and in bad weather the sea breaks heavily against them. These islets may be passed on either side at a distance of 2 to 3 miles, but it should be noted that surveys within the area are incomplete.

An outlying bank, with a least depth of 66m, lies about 20 miles WNW of Balintang Islets.

Calayan Bank (19°40'N., 121°29'E.) lies near the W side of Balintang Channel, about 13 miles NNW of Panuitan Island. The sea breaks heavily over the bank in rough weather.

A shoal, with a depth of 11m, was reported on the bank about 12.5 miles NNW of the N extremity of Panuitan Island. A 13.7m depth lies about 4 miles further NNW.

Babuyan Islands

1.7 The Babuyan Islands (19°10'N. 121°47'E.), a group of five islands and their adjacent islets and dangers, lie between Balintang and Babuyan Channels. The islands are high, mountainous, and steep-to.

Babuyan Island (19°32'N., 121°57'E.), the northeasternmost and highest island of the group, is steep-to and wooded.

Mount Pangasun, the highest peak, is located in the middle of the island and is often obscured by clouds.

Pan de Azucar Island, a slender pinnacle rock, lies at the outer end of a reef that extends 0.5 mile SE from the S end of the island. A village stands on the SW side of the island. San Dionisio, the largest settlement, is a small village situated at the mouth of a stream on the SW side of Babuyan Island.

A reef, with two rocks awash, extends almost 0.25 mile N from the N extremity of the island. A stranded wreck lies close SE of the rocks. The best landing place is at Barugan Cove on the N coast, but there is no protected anchorage. There are no sheltered anchorages off the island. Heavy tide rips occur from 1 to 3 miles off various points of the island.

Calayan Island (19°20'N., 121°28'E.) appears as a long ridge with mountain peaks at each end. Mount Calayan, the highest peak, stands in the middle of the island. The island is reported to be a good radar target for up to 16 miles. The coast of the island consists mostly of rocky cliffs, undermined by the sea, and fringed by a narrow coral reef which is marked by breakers.

A small steep-to reef, on which lies a rock, is located 1.75 miles W of the SE extremity of the island. Catanapan Point, the W extremity of the island, is a good radar target for up to 11 miles. A shoal, with a depth of 16.5m, lies about 1 mile NW of the point.

The tidal currents are quite strong in the vicinity of the island and are reported to set in an opposite direction to those encountered farther offshore. Heavy tide-rips occur off several of the salient points which should be given a berth of at least 1 mile when rounding them.

1.8 Calayan (19°16'N., 121°28'E.) ([World Port Index No. 57980](#)), a small town, lies near the middle of a 4 mile strip of sandy beach on the S side of Calayan Island. A large schoolhouse with a galvanized iron roof, and the white stone building of the Weather Bureau Station, are both prominent. Storm signals are displayed from the station.

The best anchorage is S of the town, about 0.5 mile offshore, in a depth of 37m. Small vessels anchor in **Cibang Cove** (19°15'N., 121°32'E.).

Panuitan Island (19°26'N., 121°30'E.) rises abruptly from the shore on all sides to a long, even ridge, which is slightly higher at the N end. A number of above and below-water dangers closely fringe the island.

The shore reef extends about 0.15 mile N and NE of the island, with rocks awash, near their outer edges. Several pinnacle rocks are on the shore reef on the NE side of the island.

The top and sides of the island are covered with grass and the W slope, with small bushes. A rock, with a depth of 2.5m, lies about 2 miles W of Pine Point.

Wyllie Rocks (19°30'N., 121°31'E.), 2.5 miles N of Panuitan Island, consists of a large black rock and two small rocks, awash, about 0.1 mile NE of the large rock.

Numerous shoals and coral heads lie within 0.5 mile of the large rock. Violent rips and swirls occur over this bank even in calm weather. The rocks should be given a wide berth.

Camiguin Island (18°55'N., 121°55'E.) lies about 26 miles SE of Calayan Island. The island is wooded and mountainous with its highest peak in the NE section of the island. The higher peaks are frequently obscured by clouds. Mount Camiguin is an active volcano that lies at the SW end of the island. There are deep valleys between the volcano and the lesser peaks around it, so that when first sighted from S they appear as separate islands.

A stranded wreck lies 1 mile S of Nagayaman Point, the NE extremity of the island.

On the SE side of the island several high rocks lie on or close to the narrow, steep-to coral reef which fringes its shores. Camiguin Bank, the center of which lies about 6 miles NW of the NW side of Camiguin Island, has a least depth of 20m, coral, and is marked by tide-rips.

1.9 Port San Pio Quinto (18°54'N., 121°52'E.) lies on the W coast of Camiguin Island. A prominent yellow and red cliff situated S of the port affords good shelter with NE winds, and it is the only place in the Babuyan Islands where a large vessel can lie in reasonable safety.

Balutubat is a village that stands on the NE side of the harbor. The village is obscured by trees, but the schoolhouse near the beach is partly visible from the anchorage.

Depths—Limitations.—Inside the harbor there are depths of 22 to 55m, which lie about 0.25 to 0.75 mile offshore from Camiguin. There are a number of detached dangers closer offshore, and it shoals abruptly to the fringing reef. A shoal, with a depth of 4.9m, lies about 0.5 mile offshore and 1.75 miles ENE of Magasasut Point.

Aspect.—Pamoctan Island lies in the middle of the entrance to Port San Pio Quinto. The island is a good landmark, appearing as a single cone from N and S, but from the W shows two distinct peaks, the N one being the higher.

The N entrance channel to Port San Pio Quinto lies between Pamoctan Island and a reef that extends about 0.25 mile SSW from Nagpalbosan Point. A reef, with a depth of 10.3m, lies in mid-channel. In heavy weather the sea breaks over this reef.

The S channel to the port lies between Pamoctan Island and Magasasut Point. This channel is deep and clear of dangers. Pinon Island lies about 0.5 mile W of Magasasut Point; a reef extends about 0.15 mile N and S from the island, and a detached rock, 4.6m high, lies about 0.5 mile S of the islet.

Anchorage.—The best anchorage for Port San Pio Quinto is about 1 mile E of the SE point of Pamoctan Island, in a depth of about 27.4m, sand and broken coral. The port is exposed to W winds, but some protection can be obtained by anchoring close E of Pamoctan Island, in 29m. The harbor affords good shelter from the Northeast Monsoon.

Caution.—Avoid the reefs fringing the NE entrance point, and dangerous wrecks lying off the NE shore of the port.

1.10 Guinapac Rocks (18°59'N., 122°06'E.), 6 miles E of the N end of Camiguin Island, consist of two tower-like rocks, 96m and 66m high. Another rock, 6m high, lies close N. Foul ground extends 0.5 mile further N.

A submerged rock, marked by breakers, lies about 2 miles N of Guinapac Rocks. There is a safe channel between the rocks and Camiguin Island.

Didicas Rock (19°04'N., 122°12'E.), 8.5 miles NE of Guinapac Rocks, is a conical volcanic islet about 244m high. Formerly there was a group of high rocks in this position. There are heavy tide rips in this vicinity.

1.11 Fuga Island (18°53'N., 121°23'E.) lies about 20 miles W of Camiguin Island. The island is steep-to and fringed by reefs. Any fringing dangers lie within 0.75 mile offshore. A stranded wreck lies off Kiking Point, the E extremity of the island. The irregular depths off the S side of the island permits vessels to take temporary anchorage in some locations during calm weather.

Barit Island (18°52'N., 121°15'E.) is a wooded islet lying about 0.75 mile W of the W extremity of Fuga Island. A detached shoal of 3m lies about 1.25 miles W of the N end of the island. Mabaag Island lies about 0.5 mile NNE of Barit Island. The island is low and wooded and has a steep-to fringing reef and shoal water which lie as far as 0.15 mile offshore, except that it lies up to about 0.25 and 0.5 mile, respectively, off the SE and NW ends.

Musa Bay (18°53'N., 121°16'E.) lies between the W end of Fuga Island and the E sides of Barit and Mabaag Islands. The best entrance to the bay is from the S between Barit Island and Fuga Island.

The W entrance, between Barit Island and Mabaag Island, is deep and narrow. The N entrance, between Mabaag Island and Fuga Island, has a depth of 7.3m, but it is encumbered with a rock awash in the middle. The sea usually breaks over it.

This entrance should not be used except in a case of necessity. Tidal currents in the channels and in the vicinity of the islands of Musa Bay are strong.

Mabaag Island (18°53'N., 121°15'E.) is a low, wooded islet, lying 0.5 mile W of the NW extremity of Fuga Island. A reef extends about 0.5 mile NE from the NE extremity of the island. A small detached reef, with a rock awash, lies about 0.1 mile farther NE. These dangers, which are usually marked by breakers, almost block the narrow channel between Mabaag and Fuga Islands.

A reef extends 0.15 mile NW from Mabaag and a shoal, with a least depth of 5.5m, extends about 0.75 WNW from NW extremity of Mabaag.

The best anchorage is near the NE side of Barit Island, in depths of 24 to 29m, coral and sand. The bottom near Fuga Island is very rocky.

1.12 Dalupiri Island (19°05'N., 121°14'E.) lies about 8.25 miles N of Barit Island. The island consists of a hilly ridge which reaches its maximum height in its S end. A narrow, steep-to reef fringes the island up to 0.75 mile offshore.

Visita, the largest settlement, stands on a small plain on the E side of the island, 3 miles from its S end. A detached shoal, with a depth of 9m, lies about 0.75 mile E of Visita. A shoal,

with a depth of 0.9m, lies about 0.5 mile offshore, 4 miles NW of the S extremity of the island.

Vessels with local knowledge can anchor off Banoa, a settlement on the SW part of the island. Depths exceed 37m 0.5 mile offshore. Landing can be effected through a break in the reef, 0.5 SE of Banoa. The island is reported to be a good radar target up to 20 miles.

Irao Islet (18°59'N., 121°13'E.) lies about 2 miles SW of the S end of Dalupiri Island. The island is fringed by shoals as far as 0.5 mile offshore.

1.13 Babuyan Channel (18°45'N., 121°35'E.), a main shipping route, lies between the N coast of Luzon and the Babuyan Islands. The W entrance to the channel is about 15 miles wide between Fuga Island and Pata Point. The E entrance to the channel is about 20 miles wide between Camiguin Island and Cape Engano.

The tidal currents in the channel appear to set in from both ends on the rising tide, though their precise meeting place is unknown. Eddies and tidal races are numerous.

A plainly marked tide-rip has been observed between Cape Bojeador and Fuga Island.

North Coast of Luzon

1.14 Escarpada Point (Siniguian Point) (18°31'N., 122°14'E.), the NE extremity of Luzon, is a gray rocky promontory with a serrated summit. A prominent sandy beach fronts the S end of the promontory. Tide rips are often encountered E of the point. A bank, with depths of 9 to 18m, sand and rock, on which tide rips occur, extends 3 miles N of Escarpada Point. The coast between Escarpada Point and the NE entrance to Port San Vicente (Pugo Moro), about 4.5 miles W, is high and bordered by reefs with detached rocks.

Palau Island (18°33'N., 122°08'E.) lies about 5 miles WNW of Escarpada Point. The island is high, rugged, and wooded. The W shore of the island is bold and rocky with narrow sandy beaches in some of the bights. A reef, which dries, extends about 1.5 miles E from the E side of the island.

Escucha Islet, 18m high and wooded, and Cent Islet, 3m high, lie near the outer edge of this reef. A rock, awash, lies about 1 mile N of Puerto Point, a high wooded bluff forming the SW extremity of Palau.

The depths are somewhat irregular in the area lying between a position 3.5 miles E of the N end of Palau Island and a position about the same distance N of Escarpada Point.

Cape Engano (18°35'N., 122°08'E.), part of the N side of Palau Island, is the seaward end of a peninsula projecting 0.5 mile WNW and enclosing a cove on its SW side. The peninsula is mostly wooded with some part of the hills on the NW side covered with grass.

A light is shown near the cape. A shoal, with a depth of less than 11m, extends about 0.5 mile NW from Cape Engano.

Anchorage can be taken by small vessels with local knowledge in a cove on the SW side of Cape Engano, in a depth of 35m. The reefs fringing the cove lie as far as 0.1 mile offshore.

Small vessels wishing to anchor in the cove should enter with the beacon, located at the head of the cove, bearing 114°, and anchor when about 0.5 mile from the beacon. The anchorage is small in extent but offers protection from all winds except those from the W and NW.

Dos Hermanos (18°35'N., 122°08'E.) are two islets lying close NE of Cape Engano. Several above-water rocks lie 0.75 mile E of the islets. Gran Laja, 1 mile NE of the NE point of Palau Island, is a low rock on which the sea breaks. The seabed is very irregular for 2.5 miles E of the rock.



Cape Engano Light

1.15 Port San Vicente (Pugo Moro) (18°31'N., 122°08'E.) ([World Port Index No. 57995](#)) lies between the S side of Palauí Island and the coast of Luzon. The NE approach to the harbor is encumbered with reefs and dangers and should not be attempted.

Port San Vicente (Pugo Moro) is the only thoroughly protected harbor in N Luzon available as a refuge during typhoon weather, but the holding ground is poor. The port consists of an inner and outer harbor.

The outer harbor lies S of San Vicente Island, and between Puerto Point, and the coast of Luzon, S of Nulton Point. A light marks a reef off the E side of San Vicente Island.

A light is shown on the coast of Luzon, 2.75 miles S of the above light, at a place called Palawig. New Orleans Point, the S extremity of San Vicente Island, is a prominent green bluff.

The W side of the island is connected to the S side of Palauí Island by a drying reef. The fairway to the inner harbor, which has a width of about 0.1 mile, lies between two shoals.

At the entrance to the inner harbor the flood current sets NE and the ebb SW. Currents of 3 to 4 knots can be expected in the SE approach to the inner harbor between Nulton Point and Port San Vicente (Pugo Moro) Light.

The inner harbor, a small cove between the NE side of San Vicente (Pugo Moro) Island and the S side of Palauí Island, is practically landlocked and serves as a harbor of refuge for small vessels during typhoon weather. The shores of the inner harbor are fringed with reefs as far as about 0.1 to 0.3 mile offshore, which greatly restricts the space available. A shoal, with a depth of 4.1m, lies about 0.4 mile NE of the N extremity of San Vicente Island.

Facilities include a pier, with a length of 20m and a width of 10m; a wharf, with a length of 28m and a width of 9m, and a causeway 315m in length. The L-shaped pier that extends N from a position close E of Nulton Point has been extended, making the alongside berth 222m long.

Directions.—To approach the outer harbor from the W pass 0.75 mile S of Puerto Point and steer E until Rona and Escucha Islets are in range 037°. Then steer for this range which will lead to the anchorage. To enter the inner harbor from the anchorage in the outer harbor, a vessel should steer for Port Vicente Light. This light should be rounded at a distance of 137 to 183m, and anchorage can be taken about 0.25 mile NNW of it.

1.16 Rona Islet (18°32'N., 122°09'E.), 7.6m high and wooded, lies on a drying reef in the middle of the fairway about 1 mile NE of Morgan Point.

Anchorage can be taken in the outer harbor, with Rona Islet and Escucha Islet in line bearing 037° and the extremity of Puerto Point bearing 277°, in a depth of about 13m, mud.

Small vessels can anchor in the middle of the inner harbor, in 7 to 8m, mud, about 0.25 mile NNW of San Vicente (Pugo Moro) Light. The outer anchorage is exposed to W and SW winds. A detached reef, marked by a buoy, has a depth of 0.9m, and lies 0.25 mile WSW of Nulton Point.

Batulinao Point (Matara Point) (18°23'N., 122°06'E.) lies about 8 miles S of Puerto Point. The point is fringed by reefs and foul ground to a distance of about 1 mile N. The tidal currents off the point have a rate of about 0.5 knot, with a slight tidal race near the reef line.

Port Casambalangan (Irene), marked by a light, a village, lies on the E side of Batulinao Point.

Vessels with local knowledge may approach Casambalangan Bay from the N in order to avoid the shoal extending N from Batulinao Point.

Anchorage.—Anchorage can be taken, in 12 to 14m, mud, good holding ground and protection from S winds, about 0.5 mile offshore, with Puerto Point bearing 356° and Batulinao Point bearing 248°.

Pilotage.—Pilotage is compulsory.

Buguey (18°17'N., 121°50'E.), a coastal town, lies about 16 miles WSW of Batulinao Point. The town stands on the N bank of a river which enters the sea 4 miles farther ESE. The school which has a white metal roof, and the old stone church are prominent. The river entrance can be identified by the village of Minanga, which stands on its W entrance point.

1.17 Aparri (18°22'N., 121°38'E.) ([World Port Index No. 58000](#)), the principal port in N Luzon, lies on the E entrance point of the Cagayan River about 12 miles WNW of Buguey.

Depths—Limitations.—The channel over the bar usually has depths of 4 to 5m, but the depth is continually changing. Shoaling is reported to have taken place. During the Northeast Monsoon, the entrance bar is sometimes impassable and ships are obliged to seek shelter in Port San Vicente (Pugo Moro). The channel should be entered in the daytime only. Vessels usually anchor outside the bar, but small vessels can proceed upriver as far as Camalaniugan. Due to the various silting problems, there is a planned closure of the port in the future.

There is a sea berth between two mooring buoys lying at the seaward end of a submarine pipeline which extends 0.75 mile NNE from the prominent oil tank at Aparri.

Aspect.—The town of Aparri is very prominent when approaching the port. The charted tank farm and silo in town are conspicuous. A prominent aluminum oil tank stands at the NW end of the town. Linao Light is shown about 0.75 mile WNW of the W entrance point of the Cagayan River.

The town of Linao stands on Linao Point, the W entrance point of the Cagayan River. Camalaniugan, a small village, stands on the E bank of the river in a position about 6 miles SSE of the river mouth.

Lal-lo, another small village, stands on the E bank 4.5 miles farther SSW.

Pilotage.—Pilotage is compulsory for vessels over 40 grt. Advance notice of 24 hours is required by the Harbor Pilots Association, Aparri. Pilots are always in attendance when it is possible for vessels to cross the bar. Vessels awaiting a pilot should keep 1 or 2 miles N of the church at Aparri. ETA should be sent to Aparri Pilotage Station.

The pilot boat is a motorized launch.

Anchorage.—The best anchorage outside the bar is in a depth of 18 to 22m, with Aparri church bearing 180° and Linao Light bearing 247°. The anchorage is exposed to N winds.

At times freshets occur causing the river to rise rapidly. Vessels should take precautions against the strong current which reaches 6 knots, and the debris brought down with it at such times. Heavy rips occur off the entrance to the river.

1.18 The Abulug River (18°25'N., 121°26'E.) enters the sea 11 miles NW of Aparri. A town with the same name stands

on the E bank of the river, close within its entrance. It is reported that there is a depth of 3m over a sandbar and mudflats, which encumber the entrance of the river. The ebb tidal current is strong and causes a confused sea off the mouth of the river.

The **Pamplona River** (18°29'N., 121°22'E.) enters the sea about 6 miles WNW of the mouth of the Abulug River. A sandbar and mudflats encumber the entrance to the river.

Depth over the bar is reported to be 1.8m, and the river can only be entered during good weather.

Between the Abulug River and the Pamplona River the sea breaks heavily on a sandbank extending 0.5 mile from the coast.

Good anchorage can be obtained about 1 mile N of the end of a long low sandpit, at the mouth of the river, in a depth of 18m. Vessels should not proceed into lesser depths than this, or anchor E of the extremity of the sandpit.

Tidal currents in the anchorage are strong and the ebb current from the river causes a confused sea at its mouth; vessels are advised to use an adequate scope of chain.

Logs are loaded at this anchorage from March through mid-June. Since this is an open roadstead, weather conditions during the Northeast Monsoon makes this place impracticable during the remainder of the year. The town of Pamplona stands on the W bank of the river about 2.5 miles from the entrance.

Pata Point (18°38'N., 121°09'E.) is a knoll 55m high; it stands about 14 miles NW of the mouth of the Pamplona River. A small river, with a reported depth of 1.5m over the bar, enters the sea close E of the point. A wreck lies about 1 mile WNW of the light.

1.19 Claveria Bay (18°37'N., 121°04'E.) lies about 4 miles W of Pata Point and is entered between Centinela Point and Lacay-lacay Point, 2.5 miles WSW.

Taggat (18°37'N., 121°03'E.), on the W side of the bay, has a pier at the root of which are two large and prominent oil tanks.

Anchorage is available about 0.2 mile ENE of Taggat Pier, in a depth of 37m. During the monsoon, it is advisable to anchor about 0.5 mile from the pierhead in about 65m.

Cabicungan River flows into the E part of Claveria Bay. It has a bar which usually breaks. Tide-rips form off its entrance.

The town of **Claveria** (18°37'N., 121°05'E.) ([World Port Index No. 57990](#)) stands on the W side of the Cabicungan River and can be identified by the metal roof of the school.

There is a privately owned wharf with a depth alongside of 6.1m and a small pier.

Pilotage is compulsory for vessels over 40 grt. Advance notice of 24 hours is required by the Harbor Pilots Association, Appari.

Vessels may take anchorage in Claveria Bay, in depths of 18 to 27m, sand, about 0.4 mile N of Claveria. Another anchorage is available about 0.2 mile ENE of Taggat Pier, in a depth of 37m. A daylight approach is recommended.

1.20 Baket-Baket Point (18°37'N., 121°02'E.) lies about 1 mile W of Lacay-lacay Point. The point is bold and heavily wooded. It lies at the NE end of Caraballo Mountains. A pinnacle rock, with a depth of 4.6m, lies 0.5 mile N of the point and heavy tide-rips occur in this vicinity.

Pasaleng Bay (18°35'N., 120°56'E.) lies about 5 miles SW of Baket-Baket Point. The bay is deep and affords little shelter, except at its head, where the village of Pasaleng stands on the shore of the bay. A ridge of mountains rise steeply from the shore of the bay.

Madamba Rock lies about 0.5 mile W of Puac Point, the E entrance point of Pasaleng Bay. The area between the rock and the shore is foul with above and below-rocks.

Strong tidal currents have been observed in the vicinity of the rock, sometimes attaining a rate of 2 to 3 knots at springs.

Baugan Bay (18°37'N., 120°52'E.) lies close NW of Pasaleng Bay. The bay is small and open to the E.

Anchorage is afforded to small vessels, in a depth of 16.5m, protected from SW winds.

Dos Hermanos, two prominent above water rocks, lie 0.75 mile N of Baugan Bay. Strong tide rips occur in the vicinity of these rocks.

1.21 Mayraira Point (18°39'N., 120°51'E.), the N extremity of Luzon, is fringed by a reef as far as 0.1 to 0.15 mile offshore. A rocky spit, with a depth of 3m at its outer end, extends 0.75 mile NE from the point.

Heavy tide rips occur off the spit which should be given a wide berth.

Dialao Point (18°37'N., 120°47'E.) lies about 4 miles SW of Mayraira Point. The point is low, wooded, and fringed by a narrow coral reef. A light is shown from the point. The point is backed by a prominent reddish-colored ridge, 183m high, running parallel to the coast and almost bare of trees. This is the only reddish-colored ridge in the vicinity. Strong currents, along with eddies and whirlpools, are found 1 to 1.5 miles off the point.

Banguì Bay (18°33'N., 120°45'E.) lies about 3 miles SSW of Dialao Point, which is the N entrance point of the bay. The village of Banguì, situated at the head of the bay, is hidden by trees but the red roof of the school is visible above them from most directions. The bay affords anchorage sheltered from S winds. A small cove on the N side of the bay offers shelter for small craft in NE weather.

A prominent group of white rocks lie close off **Blanca Point** (18°22'N., 120°39'E.). The shore, from 1 mile E and 1.5 mile W of the point, is marked by rapidly eroding cliffs and a few coastal boulders.

Negra Point, the W entrance point of Banguì Bay, is a black, rocky point with a shoal extending almost 0.25 mile offshore. A large black rock, 1.5m high, lies about 91m NE of the point.

West Coast of Luzon

1.22 Cape Bojeador (18°30'N., 120°34'E.), the NW extremity of Luzon, lies about 5 miles SW of Negra Point.

It is low near the coast and rises gently to broken and bare ridges about 2.5 miles E. The N limit of the cape is marked by overhanging, black, coral cliffs, with a grass-covered top, 15m high. There is a sharp indentation in the reefs S of this point where landings are possible except during NW winds.

Between this indentation and the W extremity of the cape, a reef extends about 0.35 mile offshore. Detached coral heads and sunken boulders extend as far as 0.5 mile NW from the



Cape Bojeador Light

outer edge of this reef. Cape Bojeador should be given a berth of at least 1 mile.

A submerged rock, position doubtful, is reported to lie about 0.5 mile W of the W extremity of Cape Bojeador.

Cape Bojeador Light (18°30'N., 120°34'E.) stands on the summit of a prominent hill located 1 mile E of the N extremity of Cape Bojeador. The lighthouse is a white octagonal, stone tower, rising 20m, with an attached dwelling. The shore of the cape is marked by breakers.

A radar conspicuous stranded wreck lies 1.5 miles WSW of the lighthouse.

Nagabungan Bay (18°29'N., 120°34'E.) indents the coast about 0.5 mile S of the W extremity of Cape Bojeador. It is a narrow inlet entered only by small vessels with local knowledge.

Drying coral reefs extend about 0.1 mile from the S side of the bay, and about 91m from the N entrance of Nagabungan. The entrance is made further difficult by banks, with depths of less than 6m, extending from either shore, leaving a navigable channel less than 91m wide. A 7.6m shoal lies 0.3 mile WNW of the S entrance point.

1.23 Dirique Inlet (18°28'N., 120°35'E.) ([World Port Index No. 58530](#)), about 1.75 miles SSE of Nagabungan Bay, affords good anchorage to small craft with local knowledge, in a depth of 18m, during the Northeast Monsoon, sheltered from all winds except those from the SW.

Drying coral reefs and a shoal, with depths of less than 9m, extend about 0.25 mile W from the S side of the entrance and about 0.25 mile S from the N entrance point, restricting the entrance channel between the 9m curves to about 0.1 mile.

Two conspicuous aluminum domes, marked by white and red lights, stand about 5.75 miles SE of Dirique Inlet.

Laoag (18°12'N., 120°35'E.) ([World Port Index No. 58520](#)) is a town of some importance, situated 4.5 miles within the entrance to the Laoag River. A radio tower stands in Laoag.

The mouth of the river is blocked by a bar over which small craft can navigate. A landing place is convenient about 0.5 mile within the entrance.

Mount Cautit (18°13'N., 120°32'E.), a grassy sandhill, 92m high, with some trees on its summit, lies near the coast on the N side of the entrance to Laoag River. The summit rises as a nipple, and is a prominent landmark on this otherwise low coast.

There is open anchorage SW of the mouth of Laoag River. With local knowledge, a vessel can obtain anchorage, in a depth of 16m, sand, with Mount Cautit bearing 045° and Culili Point bearing 202°.

Caution.—The approach to the anchorage can become difficult due to shoaling in the river entrance.

A bank, with a depth of 44m, lies about 12 miles WNW of the Laoag River mouth.

Culili Point (18°05'N., 120°28'E.), about 6 miles S of the Laoag River entrance, is prominent from the distance. It is a rocky bluff, bare of trees, 35m high, rising from a series of sand dunes. This part of the coast is fringed by a bank, with depths of less than 5.5m, which extends up to 0.3 mile offshore.

Submarine cables lie 2.25 miles S of Culili Point. The chart best depicts where anchoring and fishing is prohibited.

1.24 Arboledan Point (18°01'N., 120°29'E.) is 4 to 6m high. It is fringed by a reef, about 0.1 mile wide, partly bare at LW. The point is marked by a light situated on a prominent ridge. The S end of this ridge is covered with bushes and a few trees that rise to an elevation of 41m.

Arboledan Point Light, stands 10m high and consists of a white concrete tower.

The mouth of the Currimao River lies close to Arboledan Point. With the exception of a narrow beach at the mouth of this river, the entire shoreline of the point is fringed with reefs extending as far as 0.1 mile offshore.

The reef dries at LW, but the outer limits are always submerged and rise sharply from deep water.

Prominent from the S is a large stone church, converted to a warehouse, which stands about 0.2 mile ENE of Arboledan Point. The church is partly obscured by coconut trees.

North Fort, a white tower, lies about midway between Arboledan Point and the stone church. South Fort, a dark stone tower, stands on the S side of the entrance to the cove.

The town of Currimao lies close E of the stone church and spreads out on both sides of the river; only part of the town can be seen from seaward.

Anchorage is available with South Fort bearing 105° and the old church bearing 032°, in a depth of 20m, soft mud. Small vessels find anchorage NE of this position, in a depth of 17m.

Port Currimao (18°01'N., 120°29'E.) ([World Port Index No. 58510](#)) is a cove entered between Arboledan Point and the N entrance point of Gan Bay, about 0.5 mile SE. This indentation in the coast provides the nearest anchorage to Laoag.

It affords a restricted shelter to vessels with local knowledge during the Northeast Monsoon (October to March) and also provides a haven when weather does not permit vessels to lie off the mouth of the Laoag River.

Caution.—A coral spit, with depths from 2 to 9m, extends 0.75 miles SW from the S entrance point to Port Currimao.

1.25 Gan Bay (17°59'N., 120°29'E.) ([World Port Index No. 58500](#)) is entered between the S entrance point of Port Currimao and Gabot Point, about 2.75 miles SSW.

From the shoreline, a drying reef extends up to 0.35 mile seaward, from a point 0.75 mile NE of Gabot Point.

The coast to the NE of this reef is composed of sandy beaches with rocky ledges between them. Depths of less than 6m extend up to 0.4 mile offshore.

Buoys mark a shoal on its N and E sides, with depths from 0.5 to 3.6m, which extends about 0.75 mile N from the drying reef. A reef, with a depth of less than 2m, lies 1.25 miles NNE of Gabot Point.

Gabot Island (17°58'N., 120°28'E.) is located on a drying reef which extends 0.25 mile NW from Gabot Point. A rock, 3m high, lies near the N extremity of this reef. There are numerous boulders scattered over the reef.

A bank, with depths of less than 6m, extends out 0.25 mile N from the prominent rock.

There is good landing on either side of Gabot Island, but wind direction and tide must be taken into account.

Muglavis village stands on the S shore of the bay about 1 mile NE of Gabot Point.

A concrete pier with a rock causeway, extending about 0.25 mile from shore with 7.3m at its head, is situated 0.4 mile NE

of Muglavis. A prominent red warehouse stands near the root of the pier.

Anchorage.—Vessels with local knowledge can take anchorage, in 11 to 18m, sand and mud, NE of the shoal on the S side of the entrance to Gan Bay. The channel leading to the anchorage, between the 5.5m curve on either side, is about 0.25 mile wide and has a fairway depth of from 22 to 28m.

Small vessels with local knowledge will find anchorage when strong N winds are in evidence, off the mouth of a cove formed in the reef 1.25 miles SSE of Solot Point, in a depth of 20m.

1.26 Solot Point (17°55'N., 120°26'E.) rises to 20m and projects out from the coast considerably. It lies about 3.75 miles SW of Gabot Point.

Badoc Island (17°55'N., 120°25'E.) lies about 0.75 mile W of Solot Point. The island and the point are separated by a fairway with a depth of 36m. The island is conspicuous on its W side, and covered with grass and a few trees. The N and W sides of Badoc Island are fringed by a below-water reef that extends about 0.25 mile offshore.

Two shoals are located 2 miles and 3.75 miles SSW of Badoc Island with depths of 12.8m.

There is anchorage between the island and the mainland, in W or moderate N winds, in a depth of 37m.

1.27 Cabugao Bay (17°50'N., 120°26'E.) is entered between a point 3 miles SSE of Solot Point and a point E of **Salomague Island** (17°48'N., 120°23'E.). This bay provides some protection from S winds.

There are a number of shoals in the bay area and caution is advised. A shoal, with a least depth of 6.4m near its outer end, extends about 1 mile NW from the N entrance of Cabugao Bay. Another shoal, with a least depth of 8.2m, extends about 0.45 mile NNW of **Cabugao Point** (17°49'N., 120°26'E.).

Cabugao Shoal (17°50'N., 120°25'E.), with a depth of 5.5m, lies approximately 1.25 miles NW of this point. A shoal, with depths of less than 9m, extends about 1 mile NNW of the S entrance point of the bay.

Anchorage.—There is anchorage available to vessels with local knowledge in the SW part of the bay, W of Cabugao Point, in depths of 12.8m.

Anchorage is also available, in a depth of 10.9 to 12.8m, in a small cove close NE of Cabugao Point, but care must be taken in order to avoid a 2.7m shoal patch lying near the head of the cove.

1.28 Salomague Point (17°47'N., 120°24'E.) is a bluff tableland 31m high. A drying reef extends 0.3 mile from the point.

Salomague Island (17°48'N., 120°23'E.), covered with grass and brushwood, lies in the N approach to the harbor about 0.5 mile offshore and serves as a good landmark from the N or S; it is fringed by a narrow coral reef, the inner part of which dries.

The channel between Salomague Island and the mainland is used by small craft with local knowledge. The fairway is 0.5 mile wide and has a least depth of 8.2m.

Salomague Harbor (17°47'N., 120°25'E.), known as the Port of Cabuago, offers protection from all but W and SW winds and is entered between Salomague Point and Darrena

Point. The harbor is of increasing commercial importance. During the Southwest Monsoon (May to September), coasting vessels have unloaded here when it is too rough at Pandan or off the Laoag River.

The harbor is fringed with reefs along the shore, reaching out as far as 0.15 mile from its N side and 0.1 mile from the S side. Two small coves become evident by the breaks in the reef. There is a beach in each cove.

1.29 Salomague (17°47'N., 120°25'E.) ([World Port Index No. 58490](#)) stands at the head of the N cove. A concrete pier, with a depth of 4.9m at its head, also lies in the N cove. There is a stranded wreck on the W side of the pier. The ruins of an old stone church lie near the foot of the pier.

The approach to the pier is foul and the pier is not fully operational; however, it is used by vessels seeking shelter from typhoons.

North Shoal, steep-to, drying 0.6m, and on which the sea generally breaks, lies off the N side of the harbor entrance, about 0.3 mile SSE of Salomague Point. Middle Shoal, with a depth of 0.9m near its center, lies near the middle of the harbor about 0.51 mile NE of Darrena Point.

Anchorage—There is good anchorage about 0.52 mile W of the light structure, with the old tower at the village of Salomague bearing 349°, in a depth of 14.6m. Small vessels can find improved shelter E of North Shoal, in a depth of 12.8m.

Directions.—Vessels approaching Salomague Harbor from N should pass at least 2 miles W of Salomague Island, and when the light structure at Dardarrat bears 090°, it should be steered for on that bearing to the anchorage.

Vessels approaching from S should keep Pinget Island bearing less than 180° until the light structure bears 090°, then the previous directions should be followed.

1.30 Darrena Point (17°46'N., 120°24'E.) is low, covered with brushwood, and fringed with a drying reef which extends as far as 0.3 mile from its S side. A spit, with depths of less than 11m, extends considerably WNW from Darrena Point; a detached 11m patch lies 1.4 miles W of the point.

Southwest Shoal (17°46'N., 120°22'E.), with a least depth of 3.6m, lies 2 miles W of Darrena Point. A 7.3m coral patch lies 1.25 miles W of Darrena Point.

Masbate Shoal (Masbete Shoal) (17°45'N., 120°23'E.), with a depth of 7.6m, lies 1.25 miles WSW of Darrena Point.

Lapog Shoal (17°45'N., 120°24'E.) lies about 1 mile S of Darrena Point and is located near the center of the entrance of Lapog Bay. A channel about 0.25 mile in width, and with depths of 11 to 18m, separates the N side of this shoal from the coastal reef extending S from Darrena Point.

Another channel, about 0.75 mile wide and with depths of from 13 to 18m, separates the S side of this shoal from the reef and shoals fringing Lapog Point.

Lapog Bay (17°44'N., 120°26'E.), entered between Darrena Point and Lapog Point, about 2 miles further SSE, affords a degree of safety to small craft but is not used by larger vessels as Salomague Harbor has better protection and holding ground.

The head of the bay consists of a sandy beach through which the Lapog River and some small streams discharge.

The S shore of the bay E of Lapog Point is fringed with drying reefs which extend as far as 0.15 mile offshore. To the E of Lapog Point, at a distance of 0.5 mile, a break in the reef leads to a sandy beach near the village of Saoang.

This village is the port for the town of San Juan.

A detached reef, which dries, lies in the NE corner of the bay in a position about 0.3 mile offshore.

Lapog Point (17°44'N., 120°25'E.), the S entrance point of the bay, is low and has a small inlet close S of it.

A spit, with depths of less than 6m, extends 10.6 mile WSW from Lapog Point. A shoal, with a depth of 3.9m, lies 1.5 miles W of Lapog Point. A dangerous wreck lies about 1 mile SW of the shoal.

The coast from Lapog Point to Pinget Island, 4 miles SW, is fringed by above and below-water reefs extending 0.5 mile offshore in places.

1.31 Pinget Island (17°41'N., 120°21'E.) is about 6m high at its S end and is sandy, and covered with brushwood. A drying reef surrounds the island and is joined to the mainland 0.5 mile E by a low sandy isthmus.

Anchorage.—With local knowledge of the island area, vessels can take anchorage either N or S of Pinget Island, taking into account the monsoon. The anchorage on the N side of the isthmus is in 12.8m, about 0.3 mile E of the N end of the island.

Small vessels can anchor closer in to the isthmus. The anchorage on the S side of the isthmus is in 10.9m, about 0.5 mile SE of the S extremity of Pinget Island.

San Ildefonso Harbor (17°39'N., 120°21'E.) is 2 miles S of Pinget Island. A concrete pier, reported destroyed, extends 0.5 mile NW from the coast. A prominent concrete tank, 3m high, stands close N of the pier.

A shoal, with a least depth of 1.5m, lies about 0.4 mile NW of the pier head. A partly constructed breakwater, reported destroyed, extends N across the middle of the shoal.

Drying reefs extend 91m offshore, almost 1 mile SE of the S extremity of Pinget Island. A reef extends 0.25 mile NW from a point located about 0.5 mile SSW of the base of the pier.

Dile Point (17°34'N., 120°20'E.), lying 6.25 miles S of Pinget Island, is low and inconspicuous. Discolored water, due to the discharge from the Abra River, is often seen from this point.

The 10m curve fronts the coast at a distance of up to 0.75 mile. Two shoals, each with a depth of 8.2m and lying about 1 mile offshore, are located, respectively, about 2.25 miles and 3 miles SSE of Dile Point.

1.32 Pandan (17°32'N., 120°22'E.) stands on the N side of the delta of the Abra River. It is the landing place for the town of Vigan which stands about 2.5 miles NNE.

Close SW of the town, standing on a hill, is a prominent white cylindrical water tank. It makes a good mark as does the white belfry of the church in Caoayan, a village about 1 mile NE of Pandan.

There is a light shown from a white concrete tower, 8m high, standing on the beach close S of Pandan.

The channels leading through the delta of the Abra River are constantly changing in position and depth, especially during the rainy season and during the Southwest Monsoon.

A depth of 1.5m can sometimes exist over the bar at the mouth of the river and local knowledge is necessary for entering.

Anchorage.—Vessels with local knowledge can take anchorage off Pandan, where some shelter is afforded from E and NE winds. During strong N winds, the ground swell sets in round Dile Point causing a heavy surf.

Vessels can anchor, in 10.9m, sand, about 0.75 mile SW of the light at Pandan, with the prominent church at Caoayan bearing 041° and **Solvec Rock** (17°27'N., 120°26'E.) bearing 140°.

1.33 Solvec Cove (17°27'N., 120°27'E.) is entered between Solvec Point and a point about 1 mile SE. The cove is only about 0.5 mile in extent, but affords some shelter from N and E winds. A village is located about 0.25 mile inland from the NE corner of the bay.

The cove can be identified by Mount Narvacan, 259m high, located about 0.5 mile E of the S entrance point. A long range of hills extends 5 miles NNE from Solvec Point to the Tetas de Santa, prominent twin peaks, 650m high. An old tower stands close to the shore almost 0.5 mile E of Solvec Point.

Solvec Rock (17°27'N., 120°26'E.), 9.1m high and square shaped, lies close offshore SW of Solvec Point. A group of above and below-water rocks connect the rock with the point. A rock, awash, lies close W of Solvec Rock.

A drying reef and foul ground extend up to 0.15 mile from the N shore of the cove, as well as a drying reef that extends 0.25 mile NW from the S entrance point of the cove. A group of rocks, with depths of less than 2m, lie about 0.15 mile WNW of the outer extremity of this reef.

A destroyed pier extends about 0.1 mile WNW from a position on the E shore of the cove, over 0.25 mile SE of the old tower.

Anchorage can be taken about 0.45 mile SE of Solvec Rock, in depths of 18 to 22m. Vessels should anchor when Solvec Rock bears 315°, and the old tower on the N shore of the cove bears 023°.

Small vessels can anchor within the cove, but the holding ground is not good. Depths over 9m are found in the center of the cove.

There is a range of mountains that extends 24 miles NNE from Solvec Point, terminating in Mount Nagapu, 1,272m high and flat-topped. The highest level of this mountain cannot be seen as it is mostly obscured by a high ridge closer to the coast.

Mount Bulagao (17°39'N., 120°30'E.) is dark colored and prominent because of its comparative isolation. As viewed from the N it appears as a rounded summit, but from the S two summits are visible, the N of which attains an elevation of 1,121m.

Vigan Gap (17°33'N., 120°30'E.), located about 7 miles NNE of Solvec Point, is a prominent divide in the mountain range; the Abra River flows through the gap.

1.34 Nalvo Bay (17°22'N., 120°27'E.) is a small cove. The bay gives some shelter during the Northeast Monsoon (October to March), but it is open to the Southwest Monsoon.

A reef extends about 0.15 mile WSW from the N entrance point. This reef is fringed by a shoal, with a depth at its outer

edge of 6.4m, extending about 0.15 mile WSW beyond the edge of the reef.

The E shore of the cove has a sandy beach which is backed by a single, pointed hill, 76m high. The S entrance point of the bay is fringed by a narrow drying reef.

The 10m curve fronts the beach about 0.5 mile offshore.

Anchorage.—Anchorage can be taken, in depths of 9 to 11m, hard sand.

Directions.—Vessels should approach the cove with the pointed hill bearing about 079°. Santa Maria Church, located 1.5 miles ENE of the pointed hill, will be seen in range with the lower part of the N slope of the hill.

Anchorage is taken when the point of land N of the N entrance point comes into range, bearing 349°, with Solvec Rock.

1.35 Port San Esteban (17°20'N., 120°26'E.) ([World Port Index No. 58470](#)) is entered between **Suso Point** (17°21'N., 120°27'E.) and San Esteban Point, about 1.5 miles SW. It serves as a harbor of refuge for small vessels during the Southwest Monsoon, but it is dangerous under the effect of a Northeast Monsoon because of a very heavy swell.

A prominent quarry, located about 0.45 mile SSE of Suso Point, appears as a prominent bare spot on the hillside. A stone tower is clearly visible on the SW side of the entrance, about 0.75 mile ENE of San Esteban Point.

The ruins of a hospital, a prominent large concrete building, is situated close to the beach at the head of the port.

Suso Shoal, with a least depth of 6.4m, coral, lies on the N side of the approach to Port San Esteban. Two detached 8.5m patches lie close together about 0.5 mile N of the stone tower. Drying reefs extend as far as 0.15 mile offshore from either side of the cove.

Through these dangers a narrow channel cuts between the reefs, tapering from 0.4 to 0.1 mile in width, and breaks through to a sandy beach at the head of the cove.

Moderate-sized vessels can obtain anchorage, in depths of 15 to 16m, about 0.375 mile N of the stone tower, or about 0.1 mile farther E, with the ruins of the hospital bearing 169°, 0.6 mile.

Small vessels with local knowledge can anchor between the reefs near the head of the cove. Vessels should approach the outer anchorage with the quarry bearing 090°.

1.36 Santiago Cove (17°17'N., 120°26'E.), about 4 miles S of Port San Esteban, provides fair shelter from the Northeast Monsoon (October to March), but is open to the SW. Reefs, which dry in parts and are visible, surround the cove on all sides as far as 0.1 mile offshore. The head of the cove consists of a sandy beach with a small river discharging near its S end.

The village of Sabangan stands on a spit between the river and the head of the cove. The town of Santiago is situated 0.5 mile NE of the head of the cove; only the church and a monastery are visible from seaward. There are depths of 11 to 18m in the outer part of the cove.

Anchorage is available, in about 12m, sand and mud, with the N entrance point bearing 320°, distant 0.2 mile.

Vessels entering Santiago Cove should keep the church at Santiago bearing 067° and anchor as above.

Caution.—A bank, with a least depth of 19.2m lying about 14 miles W of San Esteban Point, extends about 10 miles in a N to S direction.

1.37 Tamurung Point (17°15'N., 120°25'E.), 31m high, lies about 1.75 miles S of Santiago Cove. A range of hills rises to an elevation of 199m, about 0.75 mile E of the point.

Candon Point (17°13'N., 120°24'E.), with a light standing about 1 mile SE of the point, is low, heavily wooded, and fringed by a narrow reef. The village of Candon is situated about 20.75 miles SE of the point.

Anchorage is available, in depths of not less than 16m, with the extremity of Candon Point bearing 000°. Smaller vessels find anchorage, in depths of 9 to 11m, WSW of a stone house, located on the beach, about 1 mile SE of the extremity of Candon Point.

These anchorages, are partially protected from N and E winds, but, during strong N winds, the swell rolls in around the point.

Caution.—It was reported that a number of Fish Aggregating Devices were moored about 30 miles offshore N from San Fernando.

They normally consist of unlit steel pontoons with fishing topmarks and may constitute a danger to navigation, being difficult to detect by eye and radar.

There is no indication that positions off this coast are promulgated, or that the areas used are patrolled.

1.38 Santa Lucia (17°07'N., 120°27'E.), 6.5 miles SSE of Candon Point, is a small town on the coast which will be recognized by a large church with a conspicuous dome.

A light is shown from the coast near **Dardarat** (16°57'N., 120°26'E.). There is a pier extending NW from the coast about 0.5 mile NE of the light. From the pier head two concrete dolphins have been established, and three mooring buoys. There is a yellow water tank that is located near the root of the pier.

Anchorage is found, in a depth of 15m, sand and mud, about 0.1 mile NW of the light.

Luna (16°51'N., 120°22'E.) is a small town on this part of the coast identified by an old tower and a church with three towers. Two towns, Bangar and Tagudin, are 3.5 and 6 miles, respectively, NE of Luna. Mount Lusong, 271m high and grass-covered, is located 2.5 miles SE of Bangar.

1.39 Darigayos Point (16°50'N., 120°21'E.), 3.5 miles S of Luna, is low, covered with trees, and fringed by a narrow drying reef.

Darigayos Inlet, 1 mile S of the point, is a slight indentation into which the Darigayos River flows.

Darigayos Light is shown from the N entrance point of the inlet.

The inlet has irregular depths from 3 to 18m. Reefs, parts of which dry, extend about 0.325 mile W from the N entrance point and 0.25 mile WNW from the S entrance point. Pin Rock, 0.6m high, lies near the S edge of the reef.

The entrance channel is 0.1 mile wide, with depths of more than 6m. Depths of less than 6m extend 0.2 mile from the head of the inlet.

An old fort stands on the S entrance point of the inlet. There is a 26m high bluff 0.2 mile E of the fort. A village stands on the N side of the inlet. A prominent schoolhouse with a metal roof stands on the N side of the entrance close ENE of the old fort. It is reported to be a good landmark.

Anchorage for small craft may be taken, in a depth of 3m, sand, about 0.1 mile from the head of the inlet. The anchorage is open to the W and affords little protection.

The **Maragaya River** (16°46'N., 120°20'E.) discharges about 3.5 miles S of Darigayos Inlet. The river entrance is restricted by a stranded wreck.

A factory, with two conspicuous chimneys, and a large concrete silo, 38m high, stands near to the shore close N of the river entrance.

A shoal, with a least depth of 1.8m, lies about 0.2 mile offshore, about 4.5 miles S of Maragaya River.

1.40 San Fernando Harbor (16°37'N., 120°18'E.) ([World Port Index No. 58460](#)) is entered between San Fernando Point and the mainland, 10.75 miles ENE. It is a port of entry and the terminus of the railroad from Manila.

All berthing and shipping facilities are located at **Poro** (16°37'N., 120°18'E.) on the SW side of the harbor.

Winds—Weather.—The harbor and piers are protected from both the Northeast Monsoon and the Southwest Monsoon, but during strong winds from the N and NW a heavy swell has a tendency to roll into the harbor.

Depths—Limitations.—The harbor is about 1.5 miles in extent, but the entrance between the reefs extending from both sides is less than 0.5 mile wide. The reef, defined by about the 10m curve, extends about 1 mile NE from the E side of San Fernando Point, but has been reported to be extending further into the entrance channel.

Earthquake damage caused changes to berthing. There are five principal piers, all located at Port Poro:

1. Pier No. 1, 150m in length, 21m wide, with depths of 15.3m at its outer end and less than 1m at its inner end.
2. Pier No. 2, 150m in length, 21m wide, with depths of 14.3m at outer end and less than 1m at inner end.
3. Old Pier (formerly Government Pier), a 200m long concrete structure, 19m wide, with depths ranging from 1m at the inner end to 16.5m at the outer end.
4. PNOC Pier, a coal conveyor pier, 140m long, 5.8 wide with depths ranging from 14.9m at its outer end to less than 1m at its inner end.
5. Philex Conveyor Pier extends 200m from the shore, 3m wide, with depths of 9.8m at its outer end and less than 1m at its inner end.

There are four mooring buoys to assist warping while loading ore..

Vessels of 10,000 dwt can be accommodated at the piers, while vessels of 30,000 dwt can use the anchorage.

Aspect.—**San Fernando Point** (16°37'N., 120°17'E.) is the NW extremity of a peninsula, 24m high on its W side, where there are some prominent white cliffs.

San Fernando Point Light, a round metal tower and dwelling, 8m high, stands 0.6 mile S of San Fernando Point.

Two conspicuous radar domes stand 777m N of the light. Numerous radio masts stand on the peninsula, E of the lighthouse.



San Fernando Point Light

The stranded wreck of a gunboat lies close to San Fernando Point, 366m N of the radar domes.

Carlatan (16°38'N., 120°19'E.), a small village, stands at the entrance to Carlatan Lagoon, 0.5 mile SE of the E entrance point of the harbor. A light is shown from a tower 0.75 mile NE of the village.

A fixed light is shown from the top of a conspicuous water tower at Carlatan. Several radio masts with fixed obstruction lights stand 0.75 mile SSE of the water tower.

Range lights in line, bearing 144.5°, lead into the harbor, but it is reported that upon making the approach to the harbor there is considerable difficulty encountered in locating the harbor range markers at night among the shore lights, and that by day the structures do not stand out until well inside the harbor due to the early morning mist.

A conspicuous radio mast stands close SE of the front range light.

Pilotage.—Pilotage is compulsory. Vessels are met in position 16°38'N, 120°17'E, by the pilot boat which flies a red flag with the letter "P" in white. If the pilot cannot board due to bad weather, the vessel should proceed to the Quarantine Anchorage. Pilots should be ordered with an ETA of 24 hours.

Messages should be addressed to Port Pilot, San Fernando, La Union.

Anchorage.—A charted designated anchorage lies about 1 mile SW of Carlatan water tower, in depths of 22m. The holding ground is good.

During the Northeast Monsoon, the swell reaches this anchorage and is particularly heavy in the afternoon. A prohibited anchorage area lies in the S part of the harbor.

When winds are strong out of the N, vessels can take anchorage off Poro and ride easier than off San Fernando.

The recommended anchorage is located about 0.8 mile N of the Government Pier, in about 22m, mud, good holding ground. There are several mooring buoys off Poro.

Directions.—Vessels from N should bring **San Fernando Point Light** (16°37'N., 120°17'E.) to bear 180°, and steer for it until the San Fernando range lights are in line. This range leads between the buoys marking the reefs at the entrance and into the quarantine anchorage.

It is reported that the range lights are difficult to distinguish from the shore lights, and during the day the structure do not stand out until well inside the harbor. In the early morning the range lights are usually obscured by mist.

Vessels are cautioned to give the reef on the W side of the entrance channel a wide berth, as the reef is reported to have had a NE growth.

The center of the group of tanks about 320m WSW of the root of the Government Pier at Poro, bearing 198°30', leads from the range line to the piers at Poro.

1.41 Fagg Reef (16°39'N., 120°15'E.), composed of rock and sand, with a least depth of 8.2m, lies in a position about 2 miles NW of San Fernando Point.

The sea breaks over this danger in the event of heavy weather.

Two rocks, each with a depth of 1.8m, lie about 0.14 mile SE and 0.15 mile S of the S extremity of the peninsula.

An obstruction is reported to lie 1 mile S of San Fernando Light.

Caution.—There are numerous unmarked dangerous sunken wrecks and obstructions in the harbor. These wrecks, although clear of the channel, may break up in heavy weather and form new obstructions. There is a great deal of flotsam in the harbor, especially during S winds at the height of the tide, which constitutes a serious threat to navigation.

Pilings and dolphins around the piers are in poor condition and may in time break up and become navigational hazards.

Lingayen Gulf

1.42 Lingayen Gulf (16°15'N., 120°10'E.), entered between San Fernando Point and Santiago Island, about 23 miles SSW, indents the coast in a WSW direction for a distance of 30 miles and is open to the NNW.

Winds—Weather.—The prevailing wind in Lingayen Gulf is SE. During the Northeast Monsoon, land and sea breezes become regular and blow freshly, but are interrupted by strong N and NE gales. The atmosphere is clear at this time. A bank of clouds seen in the N, accompanied by a clear sky and a high barometer, is a sign of the commencement of a gale. In June, the wind blows from a SE direction in the morning, with squalls blowing down from Mount Santo Tomas and from Mount San Isidro.

Toward the evening, the wind dies down with heavy rain and thunder showers, and towards midnight the weather clears leaving a light S wind which changes to SE at dawn.

From July to October, gales from SW to W are prevalent, lasting from 3 to 15 days, and are accompanied by heavy rain. The worst season in Lingayen Gulf is from the middle of September until the end of October, when typhoons are likely to occur.

Tides—Currents.—In Lingayen Gulf currents are variable and depend to a great extent on the strength and direction of the wind. During the rainy season, the freshets from the rivers at the head of the gulf cause a N set in the gulf.

Directions.—When entering or leaving Lingayen Gulf, do not approach **Silagui Island** (16°27'N., 119°55'E.) within a distance of 8 miles and care must be taken to avoid the 11.9m patch located 10.5 miles NE of that island.

Caution.—It has been reported that due to earthquake activity, the shoreline and depths along the S coast of Lingayen Gulf may differ from what is charted.

A shoal bank, with depths of less than 18.3m, extends 8 miles NE from the NE side of Santiago Island. Detached shoals, with depths of 11.6 and 14.6m, respectively, lie about 10.75 miles NE of **Silaqui Islet** (16°27'N., 119°55'E.). The shallowest spot, with a least depth of 6.4m, lies 4 miles ENE of **Dos Hermanos Rocks** (16°26'N., 119°56'E.).

A clear channel about 13 miles wide lies W of San Fernando Point and there are no known dangers in the central part of Lingayen Gulf; a depth of over 37m is found throughout.

Lingayen Gulf—East Side

1.43 The E side of Lingayen Gulf between San Fernando Point and the W entrance of Santo Thomas, 23 miles S, consists of a continuous sandy beach with foothills only a short distance inland.

Along this stretch of coast **Research Reef** (16°35'N., 120°17'E.), with a least depth of 4.5m, lies 0.85 mile offshore and about 2.5 miles S of San Fernando Point. A detached shoal, with a least depth of 5m, lies about 3.25 miles S of San Fernando Point.

A depth of 11m was reported just inside the 20m curve, about 13.5 miles S of San Fernando Point Light.

Santa Rita Light stands 16.25 miles SSE of San Fernando Point Light.

Santo Tomas Anchorage (16°15'N., 120°22'E.) has little commercial importance and is mainly used by fishing vessels. It lies E of a sand spit, with depths of from 3 to 6m. The entrance to the anchorage is about 2.5 miles and gradually narrows to a width of 1 mile inside.

The S and E sides of the spit are steep-to, but the W side shoals gradually. Due to the depths, the spit offers little protection. The head of the anchorage is shallow.

Damortis Light (16°16'N., 120°23'E.) stands 1 mile SE of Santo Tomas town.

The best anchorage is 1 mile SE of the extremity of the W entrance point, in 13m, mud.

San Fabian (16°07'N., 120°24'E.) is located 9.5 miles S of Santo Tomas; the coast between consists mostly of a sandy beach backed by sparsely wooded hills about 90m high, and is fringed by a bank with depths of less than 9m which extends from 0.75 to 1.25 miles offshore. There is anchorage abreast the town, in depths of more than 9m.

The coast between San Fabian and the mouth of Dagupan River, 6 miles SW, is quite low and is fronted by a bank, with depths of less than 9m, which extends 1 mile offshore.

1.44 Dagupan City (16°03'N., 120°20'E.) ([World Port Index No. 58440](#)), located 2 miles S of the Dagupan River, is a

port of entry. The bar at the mouth of the river shifts frequently, but generally has a least depth of 1.8m.

Above the bar there are depths of from 2 to 4m in the fairway of the river.

A light marks Gucet Point on the E side of the river mouth.

Pilotage.—Pilotage is compulsory for all merchant vessels entering the river. This service is obtained through soundings of a whistle or by advance notice.

Anchorage.—Vessels will find anchorage off the mouth of the Dagupan River, 1.25 miles NW of the light, in depths of 11m, mud.

The S shore of Lingayen Gulf, from the entrance of Dagupan River to the mouth of the **Agno River** (16°03'N., 120°08'E.), 11 miles W, is formed by the delta of the Agno River and other small rivers. The shore is low and sandy.

Mount San Isidro, a wooded conical mountain, 800m high, stands about 3.5 miles SSW of the mouth of the Agno River.

The Agno River entrance is of good size and drains a considerable area, but has a shallow and difficult bar, with a least depth of 1.1m. Depths of less than 6m extend 1 mile N and 0.75 mile E from the W entrance point of the river.

Small vessels, with local knowledge, can reach the town of **Labrador** (16°02'N., 120°09'E.) located on the W bank of the river, 1.5 miles from its mouth.

Lingayan (Lingayen) (16°01'N., 120°13'E.) is located about 5 miles E of Labrador. The provincial building in the town provides an excellent landmark.

Lingayen Gulf—West Side

1.45 Mangas Point (16°04'N., 120°07'E.), about 2.5 miles WNW of the mouth of the Agno River, is 40m high and wooded. It is fringed by a reef extending as far as 320m offshore. A group of above-water rocks lie on the N part of the reef, 274m NE of the point.

A white house close SW of Mangas Point and a white stone municipal building are prominent landmarks when approaching from the N. A small stone pier, 274m SW of the point, is partly destroyed.

Adela Rock, with a depth of 2.7m, lies about 0.75 mile E of Mangas Point. The sea breaks on this rock in heavy weather. The reef is usually marked by a fish trap.

Portuguese Point (16°05'N., 120°07'E.), located about 0.75 mile N of Mangas Point, is 73m high and wooded. It can be identified by a small tower which is part of an old fort. From a distance of more than 7 miles the land in the vicinity of the point appears like an island.

Port Sual Light is shown from a concrete mast, 10m high, on the SE extremity of Portuguese Point.

A reef with a depth of 5.2m over its outer end, on which the sea only breaks in strong onshore winds, extends about 0.25 mile S from Portuguese Point.

A shoal, with a depth of 11.6m, lies about 0.5 mile ESE of Portuguese Point.

Port Saul (16°04'N., 120°06'E.) is entered between Mangas Point and Portuguese Point. A stone church, partly destroyed, stands 183m NW of the remains of a pier and there is also a metal water tank on a trestle situated 0.15 mile NNW of the pier.

There is a causeway that extends about 165m seaward close S of the town.

Anchorage.—Good anchorage can be taken with the SW extremity of Portuguese Point bearing 046°, and the N extremity of Mangas Point bearing 158°, in depths of from 9 to 11m, mud.

Small vessels may anchor in the N arm of the port, 0.4 mile WNW of the old fort, in depths of 9m.

Directions.—When approaching Port Sual from N, pass about 0.25 mile E of Portuguese Point and continue S until the small stone pier at the town bears 260°, when it should be steered for on that bearing. When the rocks off Mangas Point are abeam, the vessel should be hauled NW to the anchorage.

When approaching from the S or E, the N rock off Mangas Point should be brought to bear less than 270°, so as to clear **Adela Rock** (16°04'N., 120°07'E.).

1.46 Cabalitian Island (16°07'N., 120°07'E.), 3 miles NE of Port Saul, is wooded and about 1 mile in extent.

The island is fringed by a reef, with depths of less than 6m, extending 0.3 mile offshore, on which there are some islets. A shoal, with depths of less than 9m, extends 0.4 mile NE from the island.

Calpay Shoal extends about 0.5 mile S from the S extremity of Cabalitian Island. The shallowest part of the reef, which is awash, lies about 0.5 mile S of the S extremity of Cabalitian Island. The N side of the shoal is separated from the reef fringing the S side of Cabalitian Island by a deep channel about 183m wide.

Cabalitian Bay (16°06'N., 120°06'E.) may be entered by passing either N or S of Cabalitian Island, but vessels are recommended to use the S entrance channel to the bay, which lies between the steep-to S edge of Calpay Shoal and the reef fringing the coast, about 0.75 mile SW.

The W shore of the bay is fringed by a reef, with depths of less than 6m, which extends up to 0.75 mile offshore. Poro Island and a small islet lie on this shore reef 0.25 mile NNW and 0.8 mile, respectively, NW of the S entrance of the bay.

Anchorage.—Cabalitian Bay affords good anchorage, in 18 to 24m, with protection from NE winds. The recommended anchorage is 0.25 mile S of the SW extremity of Cabalitian Island, in a depth of 24m.

Directions.—Vessels entering the bay via the S channel, from a position 1.5 miles SE of the SE extremity of Cabalitian Island, should steer a course of 270° until the SW extremity of the same island bears 350°. This course leads about 0.25 mile S of the steep-to S edge of Calpay Shoal. From the last position a course of 350° leads to the anchorage off the SW extremity of the island, passing 0.25 mile W of the W side of Calpay Shoal.

1.47 Bangayao Point (16°07'N., 120°06'E.), about 0.75 mile NW of Cabalitian Island, rises steeply to a hill 53m high. The point is fringed by a reef as far as 0.15 mile offshore. Shoals, with depths of 4.9 and 10.7m lie, respectively, 0.25 mile and 0.15 mile SSW of the point.

Pao Bay (16°09'N., 120°06'E.) is entered between Bangayao Point and Bangar Point, about 0.6 mile SSW. A narrow reef, with depths of less than 4m, extends about 0.25 mile S from Bangar Point. A shoal, with a least depth of 1.8m, lies in mid-channel in a position 0.3 mile WSW of Bangar Point.

Anchorage.—Small vessels with local knowledge can take anchorage in the middle of the bay, in depths of 7 to 9m, about 0.4 mile W of Bangar Point.

Comas Island (16°09'N., 120°07'E.), small in extent, lies about 0.25 mile offshore in a position about 0.6 mile NE of Bangar Point. A drying reef connects this island to the shore. An above-water rock, lies close SE of the island.

1.48 Hundred Islands (16°13'N., 120°03'E.) are a large group of small wooded islets extending 2.25 miles NNE from a point on the mainland about 2.75 miles SE of **Toritori Point** (16°13'N., 120°00'E.). The bases of these islands are greatly undermined by the action of the sea, and landing on them is difficult.

A shoal, with a depth of 10.1m, lies about 1 mile ENE of the N islet of the group.

Anchorage.—Vessels with local knowledge can take anchorage close W of the Hundred Islands, in depths of 11 to 15m.

Lucap Bay (16°11'N., 120°01'E.), 2 miles S of Toritori Point, has a pier extending 0.2 mile offshore from the W side of the bay. There are depths of 4m and more in the approach to the pier, but its immediate vicinity has not been examined. A light is shown on the pierhead.

Cabarruyan Island (16°18'N., 119°58'E.), wooded and of moderate elevation, lies close E of Cape Bolinao. Caquiputan Strait, narrow and shoal, separates the W extremity of the island from the E side of Cape Bolinao.

The island is fringed by a reef which extends about 2 miles offshore from the N and E sides. Shoals, with depths of less than 11m, extend as far as 2.75 miles offshore.

Siapar Island and Narra Island, small in extent, lie about 2.5 and 2.25 miles, respectively, W of **Carot Point** (16°21'N., 119°59'E.). The waters between Cabarruyan Island and Santiago Island to the N are shoal and mostly foul.

Cangaluyan Island (16°22'N., 119°59'E.), narrow and small in area, lies about 0.25 mile N of Carot Point.

Tandoyong Island and Panacalan Island, two small islets, lie on the fringing reef off the E side of the island, 0.25 mile ENE and 2.75 miles S, respectively, of **Tondol Point** (16°19'N., 120°01'E.).

Santiago Island (16°24'N., 119°56'E.), separated from the NE side of Cape Bolinao by Bolinao Harbor, is high and wooded. The N and E sides of the island are fringed by a drying reef extending as far as 1.75 miles offshore.

Silaqui Island, 22m high, lies on the fringing reef 1 mile NNW of the 20m bluff at the N extremity of Santiago Island. The island appears wedge-shaped when viewed from W. Vessels entering or leaving the gulf should not approach this small island within a distance of 11 miles.

Dos Hermanos Islands are three rocks, the N and the highest is 17m high and lies close W of the 20m bluff.

Tagaporo Island, small in extent and wooded, lies on the fringing reef close off the E side of Santiago Island in a position about 1.75 miles N of the SE extremity of the island.

1.49 Bolinao Harbor (16°24'N., 119°54'E.) is located between Santiago Island and the NE side of Cape Bolinao. Although the port has little commercial importance, it does

provide shelter to moderate sized vessels from the effect of all winds.

Trinchera Point (16°24'N., 119°54'E.), located 1 mile E of Balingasay Point, is the W entry point. The coast between these points consists of a drying coastal reef which extends 0.5 mile from the shore. Several shoals, with depths of less than 9m, extend as far as 0.5 mile N from the N edge of the shore reef.

The W coast of Santiago Island, between the village of Ducoy which stands on the W side of Santiago Island and **Binabalian Point** (16°23'N., 119°55'E.), located about 1.25 miles S, is fringed by a reef which extends 0.25 mile W from abreast the village to 91m abreast the point. A drying rock lies on the reef 0.25 mile SW of Ducoy.

1.50 Bolinao (16°23'N., 119°54'E.) ([World Port Index No. 58430](#)), a small and unimportant town, stands close SW of Trinchera Point. Very little of the town is visible from seaward.

Bolinao Harbor Light is shown from a concrete column, with a square topmark, 13m high, standing on the S shore of the harbor, 0.4 mile SSE of Binabalian Point. The light was reported unreliable. A disused light was reported standing close SE.

Anchorage.—There is anchorage in mid-channel W of Binabalian Point, in depths of 16 to 18m, but it is exposed to N winds. A more protected anchorage is provided in mid-channel E or W of Kiripayan Point, located on the S shore, about 0.5 mile E of Binabalian Point.

Numerous wrecks of fishing vessels line both shores of the inner anchorages between Binabalian Point and **Tambac Point** (16°23'N., 119°56'E.), and between the light-column and a position 0.5 mile SSE of Kiripayan Point.

Directions.—Vessels approaching Bolinao Harbor from the N should keep the extremity of Cape Bolinao bearing less than 220° until Bolinao Harbor Light bears 153°, when it should be steered for on that bearing. This range leads in mid-channel between the reefs on either side, in a least depth of 16.5m.

A shoal, with a least depth of 9.7m, lies about 91m NE of this track, in a position about 1.5 miles W of the NW point of Santiago Island. Also, a spot depth of 18.3m lies 183m SW of the track, 0.2 mile SW of the 9.7m patch.

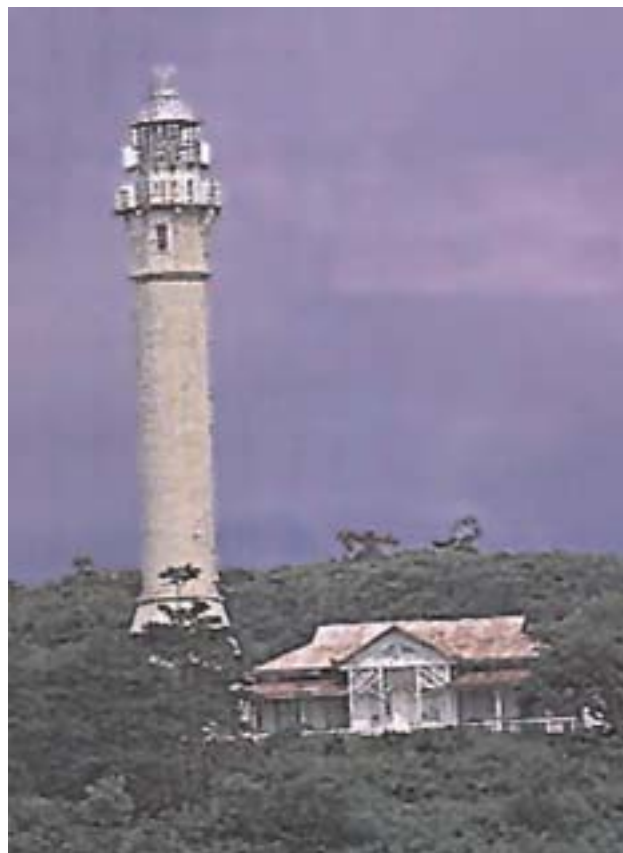
When Trinchera Point bears 243°, a mid-channel course should be steered to the anchorage off Binabalian Point.

From seaward, Bolinao Harbor Light is wooded from W by Trinchera Point and from N by Binabalian Point.

Vessels proceeding to the anchorages E of Binabalian Point should round that point at a distance of about 0.2 mile in order to avoid the shoal extending S from it. When the point is cleared, vessels should steer a mid-channel course and anchor as convenient.

1.51 Cape Bolinao (16°20'N., 119°50'E.) is the N part of the peninsula which forms the W side of Lingayen Gulf. It is of moderate height, thickly wooded, and slopes gently toward the sea.

Piedra Point (16°19'N., 119°47'E.), the W extremity of Cape Bolinao, is located 9 miles NNE of Rena Point and is rocky and wooded nearly to the beach. It attains a height of 73m, 0.75 mile inland.



Cape Bolinao Light

Cape Bolinao Light (Piedra Point Light), a round concrete tower with a lantern, 31m high, stands on Piedra Point.

Olanin Bay (16°15'N., 119°47'E.) is located 4.5 miles S of Piedra Point at the mouth of the Olanin River. There is anchorage in the middle of the bay, in a depth of 12.8m, but local knowledge is necessary.

The anchorage is open to the W, but affords some protection from the Northeast Monsoon. A conspicuous tree stands 2.25 miles N of Olanin Bay.

Agno Bay (16°08'N., 119°47'E.), entered between Rena Point, which is reported to give a good radar return up to a distance of 17 miles, and Saoit Point, 3 miles further S, is an open roadstead located about 6.5 miles S of Olanin Bay.

The Balincaguin River discharges into the S part of the bay, about 1 mile NE of Saoit Point. The bar at the mouth of the river has depths of 1.5m.

A drying reef extends 0.3 mile offshore about 1 mile NNW of the entrance to Balincaguin River. A shoal, with depths of less than 6m, extends 0.2 mile from the edge of the reef.

A reef, with a depth of 4.5m near its outer end, on which the sea breaks, extends about 0.3 mile N from Saoit Point.

Anchorage.—With knowledge of this particular area, vessels can find anchorage SE of Rena Point or off the mouth of the Balincaguin River. These anchorages afford some protection from the Northeast Monsoon.

Tambobo Point (15°58'N., 119°45'E.), about 9 miles S of Sait Point, is a small projection from the coast, and is reported to give a good radar return at distances of up to 12 miles.

Caiman Point (15°55'N., 119°46'E.), about 3.25 miles SSE of Tambobo Point, is rocky and has two detached rocks close SE of it. The outer rock is about 4.5m high and steep-to. Caiman Point is fringed by a narrow reef. A shoal, with depths of less than 9m, extends 0.6 mile SSE from the edge of the reef.

1.52 Dasol Bay (15°54'N., 119°50'E.) is entered between Caiman Point and Santa Cruz Point, about 12 miles SSE. The bay is encumbered with islets and shoals. The shores are low and intersected by several small rivers.

There are several small towns and villages standing along the shores of the bay.

Culebra Island (15°53'N., 119°47'E.), although small in extent, low, and covered with bushes, gives a good radar return up to 15 miles. A sandy beach fronts the island and foul ground, with depths of less than 9m, extends 1.25 miles SSE, 1.75 miles SSW, and 0.75 mile NW from the island.

The channel between Caiman Point and Culebra Island is deep and clear of dangers in the fairway, but detached shoals, with depths of less than 9m, are found to the E.

This channel leads to the anchorages in Caiman Cove and in Tambove Roads in the N part of Dasol Bay.

Anchorage.—Caiman Cove affords good anchorage to vessels with local knowledge, in a depth of 29m, during the Northeast Monsoon.

Tambove Roads affords good anchorage to vessels with local knowledge, in depths of from 11 to 24m. The anchorage at Tambove Roads is open to the SW, and the entrance is restricted by several dangers.

1.53 Hermana Mayor Island (15°48'N., 119°48'E.), the largest island in the approach to Dasol Bay, is partly wooded. The island lies on a bank, with depths of less than 18m, which extends about 5 miles N and 1.75 miles S from it.

The least depth on the S part of this bank is a shoal, with a depth of 5.5m, located about 0.75 mile SSE of the S extremity of the island.

A reef, parts of which dry, lies about 1.5 miles N of the island. Several shoals, with depths of less than 6m, lie between the reef and the island.

A shoal, with a least depth of 2.7m near its outer end, extends about 0.5 mile E from the NE extremity of the island. A shoal, with a least depth of 0.9m, lies about 1 mile N of the island.

Hermana Mayor Light, a concrete tower and dwelling, 9m high, stands on the summit of the island.

Hermana Menor Island (15°44'N., 119°49'E.) is 16.5m high, has sandy beaches, and is wooded.

A shoal, with depths of less than 11m, extends about 1 mile from the NE and SE sides of the island. A rock, awash, lies 0.4 mile off the SE side of the island. A rock, 3m high, lies on the fringing reef on the N side.

A shoal, with a depth of 8.2m, lies about 1 mile WSW of the S extremity of the island. Several shoals, with depths of from 7 to 12m, lie between the S end of the island and **Sabalay Reef** (15°39'N., 119°51'E.).

An unmarked channel, about 0.5 mile wide with depths of more than 5m, lies between Hermana Menor Island and Santa Cruz Point. The channel should not be used without local knowledge.

Infanta (15°50'N., 119°54'E.) is a small town on the S shore of a cove about 2.5 miles ENE of **Raton Island** (15°49'N., 119°52'E.). The cove affords good anchorage to vessels with local knowledge, in a depth of 13m, mud.

The entrance channel is deep but narrow, with dangerous reefs on either side. The channel is unmarked, but under favorable conditions the reef on the N side of the channel can be distinguished by its discoloration.

1.54 Santa Cruz Harbor (15°45'N., 119°53'E.) is entered between Santa Cruz Point and a point 2.5 miles NE. The harbor affords shelter to vessels with local knowledge from all except W winds.

A shoal, with depths of less than 9m, with several rocks awash on its inner part, extends about 1.5 miles NW from the N side of Santa Cruz Point. A shoal, with a depth of 5m, lies at the outer end of this shoal.

The S and E shores of the harbor are fronted by a shoal which extends up to 0.5 mile from shore.

Three beacons mark the N edge of the S shoal. Shoals, with depths of 4.1 and 9.1m, lie 0.75 mile and 0.9 mile, respectively, N of Santa Cruz Point.

A beacon marks a shoal, with a depth of 4.1m, lying about 1.5 mile NE of Santa Cruz Point. A shoal, with a depth of 3.2m, lies about 0.5 mile W of this beacon. A reef, with a depth of 1.2m, lies 0.25 mile SE of the beacon. The waters N and NW of the beacon generally shoal.

Santa Cruz (15°46'N., 119°54'E.) stands on the E shore of the harbor and is of little importance. There is a bell tower that stands in the S part of the town.

1.55 Baluante (Baluarte) (15°46'N., 119°54'E.) ([World Port Index No. 58420](#)), 1.25 miles SW of Santa Cruz, has a privately owned T-shaped pier that is reported to be in poor condition. The face of the pier is 52m long, with depths of 10.1 to 10.7m alongside.

Pilotage.—Pilotage is compulsory for all foreign vessels entering or leaving the harbor or berthing or unberthing at the pier and is arranged through Mansinloc Pilots Association.

Anchorage.—Anchorage can be taken in the outer part of the harbor, in depths of more than 18m, but care must be taken to avoid the numerous shoals. The recommended anchorage is located about 0.5 mile NW of the head of the pier at Baluante, in depths of 16.5m, mud.

Smaller vessels can anchor 0.75 mile W of the S end of the town of Santa Cruz, in depths of 9 to 11m.

During bad weather the anchorage may become untenable in both the Northeast Monsoon and Southwest Monsoon.

Directions.—Entrance to Santa Cruz Harbor should be made only during daylight hours and under favorable conditions.

Vessels approaching the Santa Cruz Harbor from the N or S should leave the coastal track when Hermana Mayor Island light structure bears 025°, at a distance of 4.5 miles. From this position the course should be altered to 060°, steering for the

highest part of a flat-topped mountain near the beach N of Santa Cruz, bearing 060°.

This landmark can be further identified by a mountain behind it showing four distinct knobs. This course leads between the dangers lying between Hermana Mayor Island and Hermana Menor Island, in a least depth of 26m.

When the range beacons at Baluante come into line, bearing 123°, steer for them on that bearing. This course leads about 137m SW of the recommended anchorage.

Caution.—When approaching from the N, Culebra Island and Hermana Mayor Island should be given a berth of at least 2 miles. When approaching from the S, Hermana Menor Island should be given a berth of 3.25 miles.

1.56 Santa Cruz Point (15°44'N., 119°52'E.) is low and covered with mangroves.

Naulo Point (15°42'N., 119°54'E.), lying 3 miles SE of Santa Cruz Point, is 46m high, thickly wooded, and prominent. A disused loran transmitting tower is located about 0.5 mile NW of Naulo Point.

Reefs, with depths of less than 6m, extend 0.75 mile offshore between Santa Cruz Point and Naulo Point.

Pulipo Island (15°41'N., 119°55'E.), small in extent, low, and wooded, lies in the center of a shallow bay about 1.5 miles SE of Naulo Point. It is inconspicuous from seaward.

Arenas Point (15°37'N., 119°54'E.) is low, sandy, and surrounded by shoals which extend 0.5 mile W.

The town of Candelaria is located about 1.5 miles E of Arenas Point.

A shoal, with a depth of 3.6m near its outer end, extends about 0.75 mile W from the mouth of the Laius River (Tambungan River). A detached shoal, with a depth of 4.1m, lies about 1 mile W of the mouth of the river. A shoal, with a depth of less than 1.8m, extends about 0.4 mile NW from Arenas Point.

1.57 Bani Point (15°34'N., 119°55'E.) has several rounded hills near its S extremity and a 24m high knoll almost 0.5 mile N.

A reef, with a depth of 2.7m near its outer end, extends about 0.75 mile WNW from the N side of Bani Point.

Bani Point is fringed by reefs which extend about 0.5 mile W and 1.5 miles SSE.

Sabalay Reef (15°39'N., 119°51'E.), rather extensive and somewhat irregular, lies off the entrance of the shallow bay NW of Arenas Point. A sand cay stands on its E part in a position about 2.75 miles NW of Arenas Point.

Shoals, with depths of less than 9m, extend about 1.5 miles S and 2.5 miles NW from the cay.

Several shoals, with depths of 4 to 12m, lie between Sabalay Reef and Naulo Point. Shoals, with depths of 3 to 11m, lie between Sabalay Reef and Santa Cruz Point.

These dangers can best be seen on the chart.

Tortuga Reef (15°36'N., 119°53'E.) is narrow and extends about 2 miles WSW from a position 1.5 miles SW of Arenas Point. There is a least depth of 5m. The N end of the reef lies about 1 mile S of the S extremity of Sabalay Reef. A detached shoal, with a depth of 6m, lies about 1 mile W of Arenas Point.

Caution.—Vessels should not attempt to pass between Sabalay Reef and Tortuga Reef, nor between these reefs and

the coast. Dangers exist even under the most favorable conditions when the reefs are plainly visible.

The W tangent of Hermana Menor Island, bearing 000°, leads W of all the above reefs.

1.58 Salvador Island (15°31'N., 119°55'E.) is thickly wooded and rises to a height of 40m near its NE end.

Alupihing Point is a prominent steep head about 30m high and covered with bamboo. The island slopes gradually from the N ridge to the S side.

The N side of the island is fringed by a reef which extends about 183m offshore.

A shoal, with depths of less than 6m, extends as far as 0.25 mile off the N shore.

A shoal, with depths of less than 11m, extends about 0.75 mile N from a position about 0.5 mile NE of Alupihing Point. The N edge of this shoal practically joins the shoal extending S from Bani Point.

A detached reef lies near the middle of this shoal in a position about 0.75 mile NNE of Alupihing Point. A group of rocks, some of which are awash, stand on the S edge of this reef.

A reef, parts of which dry, extends 0.6 mile NNW from Alupihing Point. A buoy marks the N side of this reef. A detached shoal, with a least depth of 10m, lies about 1 mile NW of the same point.

A shoal, with a depth of 8.5m, lies about 1.75 miles N of Alupihing Point.

1.59 Port Masinloc (15°33'N., 119°56'E.) provides good shelter from all but W winds. The port is entered between Bani Point and Alupihung Point, the NW extremity of Salvador Island, about 2 miles SSW.

A beacon, 5m high, stands on the N side of Salvador Island 0.5 mile E of Alupihing Point. Bearing 136° leads through the entrance.

Oyon Bay (15°34'N., 119°56'E.) is entered between Bani Point and Oyon Point, about 1 mile SE. The shores of the bay are fringed by reefs which extend as far as 0.4 mile offshore.

Oyon Point (15°33'N., 119°56'E.) is 38m high and prominent. The shore between Oyon Point and Tagapolo Point, about 1.5 miles SSE, is fringed by a reef as far as 0.4 mile offshore.

Tagapolo Point (15°32'N., 119°57'E.), which lies on the S side of the entrance to the Masinloc River, is low and not very prominent. Reefs, parts of which are awash, extend about 0.75 mile W from the point. The shore between Tagapolo Point and the SE arm of the harbor are fringed by reefs as far as 0.75 mile offshore.

Masinloc Harbor (15°31'N., 119°58'E.) is small in extent and quite shallow. Depths of 11 to 13m are found in the outer part and in the narrow entrance to the harbor.

A shoal, with depths of less than 6m, extends 0.2 mile NW from the S entrance point of the harbor.

1.60 Masinloc (15°33'N., 119°57'E.) ([World Port Index No. 58410](#)) is a small town located on the S side of the entrance to the Masinloc River. The port is a safe loading port except during the Southwest Monsoon.

Depths—Limitations.—A prominent T-headed concrete pier is 0.6 mile NNW of Masinloc. The face of the pier is 66m long with wood-pile clusters at each end.

The depth alongside is reported to be 9.4m at LW. There are two mooring buoys for making fast and hauling off. A red conveyor tower, 9.1m high, is located at the root of the pier.

Aspect.—Prominent in the approach is a church, a large stone building with a corrugated iron gabled roof that rises to 16.9m, and the long, low white convent situated close N of the church.

Pilotage.—Pilotage is compulsory for all foreign vessels entering the port and docking at the pier, or undocking and clearing.

It is recommended that a vessel steam offshore rather than anchor if awaiting a pilot.

Pilots state that anchors have been fouled and lost in the rugged coral bottom. Pilotage is arranged through Masinloc Pilotage Association.

Anchorage.—Vessels with local knowledge can anchor, while awaiting a pilot, in a depth of 38m, soft coral, about 1.25 miles NW of the beacon on the N shore of San Salvador Island. A tree trunk near the beacon has been painted white to aid identification.

Anchorage is also available 0.8 mile W of Masinloc, in depths of from 20 to 24m, sand. The best anchorage is reported to lie 1.1 miles W of Tangapolo Point, in a depth of 27m.

Directions.—Port Masinloc should only be entered during daylight hours and in good weather.

When bound for Port Masinloc, the beacon on Salvador Island, 0.5 mile E of Alupihing Point, should be brought ahead, bearing 136°, before approaching within 2 miles of the island.

Vessels must follow the course closely and pass NE of the buoy marking the N end of the shoal that extends about 0.6 mile NNW from Alupihing Point, on the W side of the channel. Continue on course 136° until the NE tangent of Salvador Island bears 102°.

Steer that course for about 0.1 mile until the buoy marking the S end of the shoal on the NE side of the channel bears 000°.

From this point, steer course 072° and pass about midway between the buoys marking the shoals. Vessels bound for the pier located NW of Masinloc, change course to 050° when the E extremity of Salvador Island bears 180°, and continue to the pier.

If the vessel is bound for Mansilloc Harbor, change course to 121° when the E extremity of Salvador Island bears 166°, about 0.6 mile distant, and steer a mid-channel course to the harbor; the SE part of this track becomes sinuous.

Caution.—The buoys in Port Masinloc cannot be relied on.

1.61 Port Matalvi (15°29'N., 119°55'E.) has little commercial importance but it serves as an excellent typhoon harbor. It is the only typhoon harbor between Bolinao Harbor and Port Olongapo.

There is a pier on the S shore of the port about 0.6 mile SSW of the E extremity of Matalvi Island. There is a depth of 13m off the head of the pier.

Magalawa Island (15°30'N., 119°53'E.) is about 0.5 mile in extent, low, flat, and wooded, with a sandy beach except on its W side. Some huts stand on a sand-spit near the E end of the island.

Reefs, which are above water in places, extend about 0.6 mile N and 0.6 mile S from the island and about 0.25 mile W from its W side. A shoal, with depths of less than 9m, extends 0.7 mile S and SW of the island.

Luan Island (15°30'N., 119°54'E.), 36m high near its N end, lies on the reef which extends about 1 mile N from **Matalvi Point** (15°29'N., 119°54'E.). The island is separated from the point by a very narrow channel.

A reef, with a depth of less than 2m, extends about 0.5 mile NNE from Luan Point, the N extremity of the island.

A detached shoal, with a least depth of 8.2m, lies on the W side of the entrance fairway about 0.4 mile NE of Luan Point.

1.62 Matalvi Island (15°29'N., 119°55'E.), about 30m high and wooded, lies 0.5 mile E of Luan Island. Close E of Matalvi Island, and connected to it by a drying reef, is another wooded island, 27m high. These two islands form the N side of Port Matalvi.

A shoal, with a depth of 4.5m, lies on the N side of the fairway about 0.1 mile SSW of the SW extremity of Matalvi Island. Reefs extend up to 0.1 mile from the N shore of the port.

A reef, which dries in places, extends about 0.6 mile N from the N side of Matalvi Island. Iagat Island, a low mangrove islet, lies on the E part of this reef.

A beacon, 8m high, stands on the reef extending N from Matalvi Island 0.15 mile W of Iagat Island.

The S shore of Port Matalvi rises 0.2 mile inland to hills about 75m high, and is fringed by a reef which extends 183m offshore. A reef, with a least depth of 2.3m, extends 0.2 mile N from a position about 1.25 miles ESE of Matalvi Point.

Anchorage.—There is anchorage in the channel midway between Luan Island and Matalvi Island, in a depth of 27m, mud. There is also anchorage S of the SE end of Matalvi Island, in depths of from 15 to 18m, mud. There is also anchorage S of the SE end of Matalvi Island in depths of from 15 to 18m. Small craft can anchor near the E end of the port.

Directions.—When entering Port Matalvi from a position with Alupihing Point bearing 064° and the 36m hill on Luan Island bearing 141°, steer for the concrete beacon on the reef, about 0.2 mile W of Iagat Island, on a bearing of 120°. This course leads clear of the reefs projecting from Salvador Island and Magalawa Island.

Depths of from 20 to 22m were reported to lie about 0.3 mile SSW and 0.6 mile W, respectively, of the SW point of Salvador Island. These depths lie in the fairway.

When the 36m hill on Luan Island bears 225°, steer 195° until the same hill bears 285°; then keep in mid-channel to the anchorages.

Vessels anchoring S of Matalvi Island must proceed with caution, taking into account the 4.5m shoal SSW of the SW extremity of Matalvi Island, and a 2.3m shoal extending from the S shore of the harbor.

1.63 Palauig Bay (15°27'N., 119°54'E.), 1 mile long and mostly shoal, is entered between a point 1.75 miles S of Matalvi Point and the N extremity of Palauig Point, about 1 mile SSW. The bay affords good shelter from S and E winds, but is open to the NW.

The coast, between Matalvi Point and the N entrance point of Palauig Bay, is fringed by a reef which dries in places, extending from 183 to 732m offshore.

The Salasa River flows into the bay in a position about 0.5 mile E of its S entrance point. A narrow sandspit, which forms the SE side of the bay, separates the river and bay for about 0.75 mile from its mouth.

A reef, with a depth of 5.5m, on which the sea breaks, lies 1.25 miles NW of the N extremity of Palauig Point.

Reefs, awash in places, extend 0.25 mile SW from the N entrance point and 0.7 mile N from the S entrance point.

The entrance channel, between the reefs on either side, is about 0.4 mile wide. Inside the entrance the bay opens out slightly, but is obstructed by shoals. Depths of less than 5.5m extend 0.5 mile from the E and S shores of the bay. The town of Palauig is located on the S shore of the bay. It is of little commercial importance.

Anchorage is available in the middle of the bay about 0.7 mile N of the town and about 0.3 mile E of the reef, forming the S side of the entrance, in depths of from 13 to 15m, sand.

Palauig Point (15°26'N., 119°53'E.) is marked by a light on its summit. Palauig Point Light, a metal framework tower, 9m high, is surrounded by trees and is difficult to distinguish by day. The point is low and wooded, with a detached knoll, 14.6m high, about 0.75 mile inland. It is reported that Palauig Point gives a good radar return up to of 12 miles.

Palauig Reef (15°26'N., 119°52'E.) lies with its NE end about 1.25 miles W of Palauig Point. The reef is awash and the seas break heavily.

Kinabakbagan Reef (15°21'N., 119°55'E.) lies from 1.75 to 2.75 miles offshore in a position about 4.5 miles SSE of Palauig Point. The shallowest part, with a least depth of 0.5m, lies 2.75 miles WNW of Iba Point.

Several detached shoals, with depths of from 4 to 9m, lie between Palauig Reef and Kinabakbagan Reef. A shoal, with a least depth of 0.9m, lies about 0.75 mile offshore in a position about 3.25 miles SSE of Palauig Point. Several detached shoals, with depths of 9 to 13m, lie as far as 2.5 miles SW of Kinabakbagan Reef.

1.64 Iba Point (15°20'N., 119°58'E.), about 7.5 miles SE of Palauig Point, is low and projects slightly from a sandy beach. The point is fringed by a drying reef which extends 0.25 mile offshore. A shoal, with a least depth of 6.4m, lies about 1 mile SSW of Iba Point.

Two detached shoals, with depths of 8.7m and 12.3m, lie about 3.25 miles WSW and 3.5 miles SW respectively, of Iba Point.

Aspect.—A white tank, 13.1m high, stands on Iba Point. It has been reported that the point gives a good radar return up to 10 miles. The small town of Iba has little commercial importance. It is located about 1 mile E of the point where it is partially obscured by groves of coconut and banana trees, but an iron roof of a large building is prominent from seaward.

Anchorage.—Anchorage can be taken by vessels with local knowledge S of Iba Point and about 0.75 mile from the landing place, with the extremity of the point bearing 001°, in a depth of 18m.

Directions.—Vessels approaching the anchorage should steer for the canyon N of **Mount Botolan** (15°14'N.,

120°02'E.), bearing 091°, until the iron roof at Iba bears 046°. The iron roof should be steered for on this bearing until Iba Point bears 001°, when courses should be altered for the point.

Caution.—Vessels are cautioned to avoid the 6.4m shoal SSW of the point and the coastal bank SE of the landing place.

1.65 Botolan Point (15°14'N., 120°01'E.), low and sandy, is situated about 6 miles S of Iba Point. The coast between the two points is low and sandy. It is fringed by a reef which extends up to 0.6 mile offshore in places, with depths of less than 6m.

Mount Botolan (15°14'N., 120°02'E.), 564m high, prominent, and thickly wooded, lies 2 miles E of Botolan Point at the N end of a range of mountains. A spur from Mount Botolan terminates in a 46m high bluff point close N of Botolan Point.

Two detached shoals, with depths of 6.8 and 3.9m, lie 0.7 mile NNW and 0.5 mile SW, respectively, from Botolan Point.

A bank, on which there are several detached shoals with depths of from 6 to 13m, extends about 5.5 miles offshore between Botolan Point and the town of **San Felipe** (15°04'N., 120°04'E.). The outer danger on this bank is a shoal, with a depth of 9.1m, lying about 5.25 miles SW of Botolan Point.

A detached shoal, with a depth of 8.2m, lies about 0.5 mile offshore W of the town of **San Narciso** (15°01'N., 120°05'E.).

1.66 Capones Point (14°54'N., 120°03'E.), about 21 miles S of Botolan Point, is a bare reddish headland rising to a hill, 332m high, 0.75 mile SE of its extremity, which when first seen from NW appears as an island.

Capones Islands (14°55'N., 120°01'E.) consists of a group of three small islands lying about 2 miles WNW of Capones Point.

A rock, with a depth of 6.6m, lies about 0.7 mile SW of the E extremity of the island.

Capon Grande Island is the largest of the Capones. The summit of the island is near the E end. The island, fringed by a reef, is reported to give a good radar return up to 23 miles.

Depths of less than 6m extend from 183 to 457m offshore. A rock, with a depth of 6.4m, lies 0.75 mile SW of the E extremity of the island.

Capon Grande Island Light (14°55'N., 120°01'E.), a square brick tower on a dwelling, 21m high, stands near the W end of Capon Grande.

The two remaining small islands of the group lie close together on the reef, about 1 mile NE of the E extremity of Capon Grande. A deep channel separates these islands from the larger island.

Caution.—A reporting system applies to all vessels, including pleasure craft and seaplanes on the water, transiting the area within 20 miles of Capones Islands. Vessels should establish contact on VHF channel 16 with Capones Coast Watch Station, call sign Coast Watch Capones, when 20 miles off Capones Islands.

Vessels should report the following information:

1. Vessel name.
2. Call sign.
3. Course and speed.
4. Port of registry and nationality.
5. Type of vessel.



Capon Grande Island Light

6. Type of cargo on board.
7. Port of destination and ETA.
8. Last port of call.
9. Number of crew on board.
10. Master's name.

Between Capones Point and the N entrance point of Port Silanguin, about 7.25 miles SSE, the coast is high, rocky, and indented by Calaguaguin Bay, Talisain Bay, and Nazasa Bay. These small bays afford some protection from the Northeast Monsoon. Foul ground extends about 0.2 mile offshore from the points separating these bays.

A rock, 46m high, lies near the outer edge of a spit extending about 0.2 mile SW from the N entrance point of Calaguaguin Bay.

A rock lies awash close SW of the NW entrance point of Talisain Bay. A rock, 1m high, lies about 0.3 mile SW of the N entrance point of Nazasa Bay.

Tabones Islets (Tabones Islands) (14°49'N., 120°04'E.), about 5.75 miles NW of the N entrance point of Nazasa Bay, consists of two rocky islets, the higher of which has an elevation of 39m.

Port Silanguin (14°46'N., 120°07'E.), about 10 miles SE of Nazasa Bay, is entered between the N extremity of Silanguin Island and a point on the mainland about 1 mile NW.

The harbor indents the coast for 2 miles in an ESE direction and provides fair shelter from all but W and SW winds, but reefs and dangers front the shores of the harbor as as 0.25 mile.

Anchorage.—Vessels with local knowledge can find anchorage off the sandy beach E of the extremity on the mainland on the S side of the port, in depths of 31 to 37m.

1.67 Silanguin Island (14°46'N., 120°06'E.) is bare, rounded, and 215m high. It is joined to the mainland by a reef on which stands two islets. The coast, between Sueste Point and Silanguin Island, is high and steep-to.

Los Frailes (14°45'N., 120°05'E.) are a group of six small, rocky, steep-to islets lying about 0.75 mile SW of Silanguin Island. The SW islet, 27m high, is the largest of the group; the NE islet is 11m high.

The channel between Los Frailes and Silanguin Island is deep.

Sampaloc Point (14°44'N., 120°10'E.), the S extremity of the mountainous peninsula forming the W side of Subic Bay, is 3.5 miles ESE of the S extremity of Silanguin Island.

A shoal, with a least depth of 15m, was reported about 6.25 miles S of Sampaloc Point. A depth of 33m was reported about 7.75 miles SW of the same point.

Aspect.—Cinco Picos are five peaks, the highest is 929m high, situated 3.25 miles N of Sampaloc Point.

Rounded Peak, 935m high, stands 4.5 miles NNW of the same point. Pointed Peak, 1,071m high, is 3.5 miles NNW of Rounded Peak.

Mount Agudo, 1,006m high, and Mount Maubanban, 1035m high, are located 2.25 and 2.75 miles; respectively, NNW of Pointed Peak.

Biniptican Point (14°45'N., 120°11'E.) is located about 1 mile E of Sampaloc Point.

Sueste Point (14°45'N., 120°11'E.), 0.75 miles NE of Biniptican Point, is high, steep-to, and marked by a light.

Sueste Point Light, 9m high, is a white, rounded, metal dwelling with a red roof.

Shark Point (14°46'N., 120°11'E.) lies 0.4 mile NE of Sueste Point. An islet lies close off this point.

Subic Bay (14°50'N., 120°14'E.)

[World Port Index No. 58395](#)

1.68 Subic Bay is entered between Sueste Point and **Binanga Point** (Minang Point) (14°45'N., 120°15'E.), about 0.75 miles E. The seaward limit of the bay lies between Sampaloc Point and Mayagao Point, almost 6 miles ESE. The bay indents the coast about 8 miles in a general N direction, with a width of about 3.5 miles.

Winds—Weather.—During the months of October through April, Subic Bay is under the influence of the Northeast Monsoon. Winds are predominantly from the ENE with the wind velocity varying from light (5 to 10 knots) during night time hours, to moderate (15 to 20 knots) during daylight hours. Skies are generally fair with variable upper level cloudiness.

Occasionally, the remnants of a mid-latitudes cold front (shearline) will pass through the area producing mostly cloudy skies with light intermitten precipitation. For 24 to 48 hours following passage of these shearlines, Subic Bay experiences a

surge of the Northeast Monsoon with NE winds of small craft force.

Ships entering at the mouth of the bay often report substantially higher sustained winds than those being reported further up the bay. Apparently, this effect is due to the mountainous terrain surrounding the bay which produces a funneling of winds at the mouth of the bay.

During the month of May until the latter part of June, the winds veer around to the SSE and S, gradually becoming WSW to SW. These SW winds continue until the latter part of September or early October. Frequent squalls and thunderstorms occur with maximum gusts of wind to as much as 50 knots or more.

From Buoy 4, abeam of Grande Island, where squalls are usually first visible, to Buoy A, at the entrance to Port Olongapo, a distance of approximately 3 miles, an approaching squall can overtake a ship in a short time.

Although typhoons can occur at any time of the year, the majority of those which threaten Subic Bay occur in the months of June through December.

Tides—Currents.—Tidal currents are variable and mostly negligible in the bay; however, during the Southwest Monsoon, heavy rains draining into the **Binictican River** (14°49'N., 120°18'E.) create a strong S current in the vicinity of Rivera Point.

Depths—Limitations.—Depths in Subic Bay decrease regularly from 60m in the entrance to 13.7m near the head. The greater part of the bay has been swept to depths of 14.9m.

The entrance channel across Subic Bay and into Port Olongapo is about 0.4 mile wide, and has generally decreasing depths of from 55 to 28m.

Aspect.—The control tower of the former Naval Air Station at Cubi Point and the former Naval Signal Tower at Port Olongapo are both visible from a good distance to seaward.

Subic Bay is reported to give a good radar return up to 20 miles.

Caution.—Several naval operating areas front the coast of Subic Bay.

As a result of completed mining and mine recovery exercises, some mines remain unrecovered in the area bound by the following points:

- a. 14°46'59"N, 120°14'10"E
- b. 14°46'44"N, 120°15'24"E
- c. 14°47'39"N, 120°14'30"E
- d. 14°47'05"N, 120°15'24"E

Mariners are requested to give this area a wide berth.

Subic Bay—Approaches

1.69 Grande Island (14°46'N., 120°14'E.), 51m high, divides the entrance to Subic Bay into two channels. The main channel, lying W of Grande Island, is wide, deep, and clear of dangers. The channel lying E of Grande Island is closed to navigation.

Two towers situated near the NW extremity of the island. A prominent radar mast situated about 0.3 mile S of these towers. A signal station is situated on Grande Island.

The island is fringed by a reef, with depths of less than 6m, that extends 0.5 mile S.

A mine laying practice area, about 732m square, lies with its center 1,280m SE of Grande Island, and its W side close E of the charted 015°/195° track.

Chiquita Island lies on this reef, 0.1 mile S of Grande Island.

Twenty Four-foot Shoal (14°45'N., 120°13'E.), marked by a buoy on its W side, is a coral patch, with a least depth of 7.3m, that lies 0.7 mile S of Chiquita Island.

Caution.—Grande Island, Chiquita Island, and the waters within 460m of them, constitute a restricted area at night. Boats should not enter these areas except in an emergency.

Subic Bay—West Side

1.70 Sampaloc Point, the W entrance point of Subic Bay and Biniptican Point, about 1 mile E, are high prominent points projecting southward.

Generally, the W shore, backed by high land and generally steep-to, curves N from Sueste Point for about 7.5 miles.

Macmany Point (14°47'N., 120°12'E.) is located 1.5 miles NNE of Sueste Point.

A buoy is moored 0.3 mile E of this point and marks a shoal, with depths of 11m or less, which extend 0.2 mile E from the point.

Agusuhin Point (14°49'N., 120°13'E.) is located 2.5 miles NNE of Macmany Point. The entrance to the Agusuhin River lies 0.25 mile S of the point.

A detached coral shoal, with a depth of 1.8m, lies 0.2 mile SE of the river entrance. A buoy marks the S side of the shoal.

Two wrecks, with swept depths of less than 11m, lie 0.2 mile S of the buoy.

Manisbaso Point (14°51'N., 120°13'E.) is located 1.75 miles N of Agusuhin Point. It is reported that the ruins of two piers, with some dolphins close inshore between them, stand 0.5 mile NW of Manisbaso Point.

Subic Bay—East Side

1.71 Camayan Point (14°46'N., 120°14'E.), 0.75 mile NW of Binanga Point, is fringed by a reef that extends about 0.25 mile offshore. A shoal, with depths of less than 6m, extends nearly 0.5 mile W from the edge of the reef fronting the point.

When navigating off this part of the coast a good landmark is the conspicuous, white, cylindrical tower located on the 485m summit of Mount Santa Rita, which is about 8 miles ENE of Camayan Point. Red obstruction lights are shown from the tower.

The coast between Binanga Point and Camayan Point is fringed by a drying reef which extends up to 0.25 mile offshore.

Ilanin Bay (14°46'N., 120°15'E.) is entered between Camayan Point and Nabasan Point, about 1 mile ENE.

Camayan Ammunition Wharf, 140m in length with a depth of 10.6m alongside, is situated on the S shore of the bay, about 0.5 mile ENE of Camayan Point.

Two beacons are located about 0.7 mile E of Camayan Point and when in range, bearing 140.5°, lead to Camayan Wharf.

A shoal, as defined by the 5.5m curve, extends about 0.35 mile W and 0.15 mile S of Nabasan Point. Buoys mark the S and SW sides of the shoal.

Triboa Bay (14°47'N., 120°16'E.) is entered between Nabasan Point and Pamocan Point, about 1 mile NNE.

Nabasan Ammunition Wharf, 183m long, with a depth of 14m alongside, is located in the SW corner of the bay, about 0.25 mile NE of Nabasan Point. Explosives are handled at this wharf.

Caution.—At the two explosives wharfs, there is a 0.5 to 1.5 knot current that normally sets on the piers regardless of the tide or wind. It is strongest on the W end of each pier, caused in part by the **Triboa River** (14°47'N., 120°17'E.) draining into Triboa Bay.

1.72 Pamocan Point (14°47'N., 120°16'E.) stands on the S side of an area of reclaimed land on which stands part of the Naval Air Station. Pamocan Shoal, with depths of less than 6m, extends 0.3 mile NW of the W extremity of the reclaimed land.

Sixteen-foot Shoal (14°48'N., 120°15'E.), a detached 4.9m patch, lies 0.3 mile farther NW. An isolated 4.9m patch lies about 0.4 mile further NW from the shallowest part of Sixteen-foot Shoal.

Caution.—The holding ground in Triboa Bay is poor. Caution should be exercised when anchored here in bad weather.

There are mooring buoys in Triboa Bay. A submarine cable crosses Ilanin Bay and Triboa Bay.

1.73 Cubi Point (14°48'N., 120°15'E.), 2.5 miles N of Pamocan Point, is the S entrance point to Port Olongapo. It is also the site of the Naval Air Station. Two towers stand near the aviation light.

The control tower on this complex, which is situated about 0.45 mile SSE of the aviation light, is visible from a good distance seaward.

Cubi Shoal, with depths of less than 6m, extends 0.5 mile NW and 0.75 mile W of Cubi Point. It is marked by a buoy on its NW side.

Leyte Wharf (Carrier Wharf), 305m long with a depth of 13.7m alongside, is located about 0.2 mile NE of Cubi Point.

1.74 Port Olongapo (14°49'N., 120°16'E.) ([World Port Index No. 58400](#)), entered between Cubi Point and Kalaklan Point, 1.5 miles N, recedes about 1.5 miles to the E. Port Olongapo consists of an outer and an inner harbor.

The N shore of the port, between Kalaklan Point and Rivera Point, about 1.25 miles ESE, is low and sandy with low marshy ground inland.

A shoal, with depths of less than 6m, extends as far as 0.2 mile offshore between these points, except in the vicinity of the main wharves.

Caiman Shoal (14°48'N., 120°16'E.), with a least depth of 12.3m, lies 0.6 mile NE of the N extremity of Cubi Point. Carrasco Shoal, with a least depth of 12m, lies 0.25 mile S of Caiman Shoal.

The inner harbor is entered between Rivera Point and **Nagcaban Point** (14°48'N., 120°17'E.), about 1 mile S of Rivera Point. A bank, with a depth of 4.2m at its outer end, extends 0.15 mile E of Nagcaban Point. Other shoal areas, with depths of less than 18m and as little as 9m, lie up to 0.6 mile NNW of Nagcaban Point.

Depths—Limitations.—Alava Wharf, the main wharf, extends WNW from Rivera Point. This wharf is 700m long, with alongside depths of 7.6 to 15.2m.

The wharves at Rivera Point, which are situated on the E side of the point, have a total berthing length of 684m. Depths alongside range from 9.4 to 13.7m.

Bravo Wharf, 320m long, is on the W side of Inner Basin and lies 0.15 mile W of Rivera Point, with depths of 7.5 to 9.7m alongside.

Delong Pier, 175m in length and 18m wide, is situated 0.25 mile NE of Rivera Point.

Osir Basin, N of Inner Basin, is situated 0.3 mile NNE of Rivera Point. There are a number of moorings in Osir Basin.

Marine Terminal, 229m long, with a depth of 12.1m alongside either side, extends SW from reclaimed land about 0.5 mile NE of Rivera Point.

A fueling pier extends 270m WSW from **Maritan Point** (14°49'N., 120°18'E.). There are depths of 11.5m on the N side of the pier and 13.7m on the S side of the pier.

Boton Wharf West, with a depth of 5m alongside, and Boton Wharf East, 410m long with a depth alongside of 9.8m, extend NW and NE along the shore, respectively, from a position about 0.45 mile SSE of Nagcaban Point.

Aspect.—A prominent radar tower stands near the waterfront, about 0.8 mile SE of Kalaklan Point. The Port Control Office is situated 0.2 mile SE of the radar tower.

A tower, from which red and white lights are shown, stands on the W entrance point of the Inner Basin.

The buildings of the naval station, which occupy this part of the coast, are prominent.

Pilotage.—Pilotage is compulsory for merchant vessels entering Subic Bay. There are three pilot stations. Pilots normally board off Grande Island. Pilotage is not compulsory for vessels entering or leaving PHILSECO (Philippine Shipyard and Engineering Corporation), which is located in the northernmost part of Subic Bay at Cabangan Point. Should these services be required, 48 hours notice should be given to the Chief Pilot, Manila Pilots Association.

Anchorage.—The greater part of Subic Bay has been designated anchorage areas for all classes of vessels.

Vessels may not shift from the berth allocated to them.

Anchorage in the channel is prohibited.

Explosives Anchorage Area D is located on the SW side of Subic Bay about 1 mile NW of Grande Island.

Explosives Anchorage Area G is located in Triboa. The confines of these anchorages are depicted on the chart.

Directions.—When entering Subic Bay from a position about 3 miles S of Sueste Point, vessels should steer through the entrance on a course of 015° so as to pass midway between Grande Island and Macmany Point, about 1.25 miles W.

Vessels proceeding to Port Olongapo should continue on this course until the NW extremity of Grande Island bears about 132°, distant 0.6 mile. The course should then be altered to 051°, which will place the Port Olongapo Buoy A and Kalaklan Point light structure nearly in range ahead. Pass close S of Port Olongapo Buoy A and then steer 090° for the dock area.

1.75 Kalaklan Point (14°50'N., 120°16'E.) is low, but rises steeply to a height of 131m, about 0.45 mile N. The W mouth of the Kalaklan River enters the bay close E of the point.

Kalaklan Point Light is shown from a concrete tower, 10m high, at the extremity of the point.

Mayanga Island (14°50'N., 120°14'E.), a small islet 12m high, lies near the middle of Subic Bay in a position about 2 miles WNW of Kalaklan Point. A shoal, with depths of less than 6m, extends 0.35 mile S and 0.5 mile N from the islet.

A buoy is moored on the SW side of the shoal that extends S from the islet. A conspicuous white, disused light stands on the islet.

Gaviota Rock (14°51'N., 120°15'E.), 2.4m high, lies near the S end of a shoal with depths of less than 6m. This shoal extends 0.5 mile S from the coast in a position about 1.5 miles NW of Kalaklan Point. A conspicuous house stands on the rock.

Pequena Island (14°51'N., 120°14'E.), 58m high, lies about 1.25 miles N of Mayanga Island in a position about 0.5 mile offshore. A shoal, with depths of less than 6m, extends 0.5 mile S, and 0.25 mile E and W from the island. Foul ground and shoals join the N side of the island to the shore NE.

A rock, 1.5m high, and a small islet, 2.7m high, lie within 0.125 mile of the S extremity of the island.

A wreck, with a depth of 9.5m, marked by a buoy, lies about 0.5 mile WSW of the S end of Pequena Island.

Cangrejo Rock, 1m high, lies about 0.125 mile NE of the N extremity of Pequena Island.

Subic (14°53'N., 120°14'E.) is a small town located at the head of Subic Bay. Important here is the huge Subic ship repair yard at Cabangan Point.

Facilities include a drydock for vessels up to 300,000 dwt. There are three repair berths of 300m, 255m, and 205m in length. All have an alongside depth of 9m.

West Coast of Luzon (continued)

1.76 Port Binanga (14°44'N., 120°15'E.) lies on the E side of the outer entrance to Subic Bay. It is entered between Binanga Point, the E entrance point of Subic Bay, and Buiong Point, about 1 mile SSE. Requests to enter Port Binanga should be made as for Subic Bay.

Port Binanga indents the coast for a distance of about 1.5 miles in an E direction. The N and S shores of the bay are fringed by reefs which extend as far as 0.1 mile offshore.

The 10.9m curve fronts the head of the bay as far as 0.75 mile. Two sandy beaches, separated by **Dapua Point** (14°44'N., 120°16'E.), stand at the head of the bay. The point is prominent, with vertical cliffs from 18 to 21m high.

A shoal, with depths of less than 11m, extends about 0.5 mile WSW from Binanga Point. Detached shoals, with depths of from 11 to 8m, lie 0.6 mile W and 0.45 mile, respectively, WSW of Binanga Point.

Detached shoals, with depths of 12.8m, lie on the S side of the approach to the bay in positions about 1 mile and 1.25 miles SSW of Binanga Point. A detached shoal, with a depth of 9.1m, lies about 0.52 mile SW of the same point.

Urdanetta Shoal, narrow, with a least depth of 4.5m, extends about 0.25 mile E from a position 0.25 mile S of Binanga Point.

Anchorage.—Vessels with prior authorization can take anchorage, in 7 to 11m, mud, in the center of Port Binanga, sheltered from all but W winds. When entering the bay a vessel should keep Dapua Point bearing 090°, which leads clear of the shoals off the entrance.

Buiong Point (14°44'N., 120°15'E.) is the S entrance point of Port Binanga.

A detached shoal, with a depth of 11.9m, lies about 0.3 mile offshore in a position about 0.8 mile SW of Buiong Point.

Two detached shoals, with depths of 7.3 and 10m, lie about 1 mile and 1.5 miles SSW, respectively, of Buiong Point.

Mayagao Point (14°42'N., 120°15'E.), 2.5 miles S of Buiong Point, is low and marshy. Extensive shoals, with depths of 2.7 to 9.1m, extend 0.5 mile W and 1 mile S of Mayagao Point.

The coast between Buiong Point and Mayagao Point, about 2.5 miles N, is fronted by a reef which extends 400 to 0.5 mile offshore in places.

Illinin Point (14°44'N., 120°15'E.) is located 2 miles N of Mayagao Point. A shoal sounding of 15m was reported to lie 7.5 miles SW of Mayagao Point.

Morong Shoal (14°40'N., 120°15'E.), with a least depth of 9.7m, lies 1.25 miles S of Mayagao Point. A channel about 0.5 mile wide lies between this shoal and the coastal shoal NE.

Panibatuhan Point (14°40'N., 120°16'E.), lying 1.75 miles SE of Mayagao Point, is fronted by a reef which extends as far as 0.15 mile offshore. A conveyor pier extends 235m SE from the S side of Panibatuhan Point. A mooring buoy lies about 0.3 mile SE of the pierhead. A sandy beach extends 3 miles SE from Panibatuhan Point.

A shoal, with depths of less than 9m, extends 0.75 mile SW from the point. A detached shoal, with a depth of 11.6m, lies about 1.1 mile SW of Panibatuhan Point.

1.77 Napo Point (14°38'N., 120°19'E.) is located 3.75 miles SE of Panibatuhan Point. A large cylindrical tank and a building with a prominent dome that is part of a nuclear power station stand on Napo Point.

Pandil Islet, 13m high, lies close S of Napo Point. The islet is joined to the point by a reef. Foul ground extends almost 0.5 mile S from the islet. Several buoys are situated in the small bay entered NW of Napo Point.

Bagac Bay (14°36'N., 120°23'E.) is entered between Napo Point and Saysain Point, about 5.5 miles SE. It is a large exposed bay open to the SW. Several streams enter this bay.

Mapalan Point, located about 2 miles E of Napo Point, is fringed by foul ground to a distance of 0.5 mile SSW.

An islet, 37m high, lies close offshore about 0.5 mile NW of Mapalan Point.

Cabayoc Point (14°37'N., 120°22'E.), located 1.25 miles E of Mapalan Point, is fringed by foul ground which extends 0.25 mile SW. A light is shown close S of Cabayoc Point.

The town of Bagac, which is of little commercial importance, is located 2 miles SSE of Cabayoc Point.

Foul ground extends 0.5 mile W from **Saysain Point** (14°34'N., 120°23'E.). A detached shoal, with a depth of 5.5m, lies about 1.25 miles NNW of Saysain Point.

Anchorage.—Anchorage is available off the town of Bagac, in depths of 9 to 18m. The anchorage is an open roadstead and is exposed to strong winds that blow down from the Mariveles Mountains and Mount Silangan.

The Northeast Monsoon reaches the bay through the valley between these mountains.

An explosives dumping area lies centered about 12 miles W of **Caibobo Point** (14°30'N., 120°22'E.).

1.78 Luzon Point (14°28'N., 120°23'E.), located 6.75 miles to the S of Saysain Point, is high and rocky. There are tide rips W of the point. Dumping grounds for chemicals and explosives lie 22.5 miles W and 13 miles WNW; respectively, of Luzon Point.

Guay Point (14°27'N., 120°24'E.) is located about 0.75 mile ESE of Luzon Point. A drying rock lies about 0.2 mile SW of Guay Point.

Guay Bay is entered between Guay Point and Vigia Point, about 1.5 miles ESE. Anchorage, sheltered from NE winds, may be obtained.

Hornos Point (14°25'N., 120°28'E.), narrow and projecting, extends about 0.5 mile SW from a position 6 miles SE of Luzon Point.

Cochinos Point (14°25'N., 120°30'E.), about 1.25 miles E of Hornos Point, is the point marking the N side of the outer limit of Manila Bay. The SE extremity of this peninsula is 108m high and connected to the mainland NW by a narrow isthmus.

Los Cochinos are a group of five rocks, 6 to 19m high, which stand on a shoal extending about 0.4 mile S of Cochinos Point. This shoal, with depths of less than 6m, is connected to the point by a drying reef.

Guardia Shoal (14°24'N., 120°30'E.), small in extent and with a depth of 1.8m, lies 0.5 mile SSE of Cochinos Point. The SE side of the shoal was reported no longer marked by a buoy.

Palomonti Rocks, 5m high, are located 0.4 mile SE of Cochinos Point. A shoal, with a depth of 4m, extends about 0.1 mile SW from the rocks, and a shoal, with a depth of 0.9m, extends the same distance N.

Manila Bay

1.79 Manila Bay (14°35'N., 120°45'E.) is entered between Cochinos Point and Limit Point, about 12 miles SSE. The bay is about 30 miles long and 22 miles wide.

The entrance is divided into two channels, North Channel and South Channel, by Corregidor and Caballo Islands. These channels are deep and clear of dangers in the fairway.

The South Channel has been dredged to 11m

In general, the channel providing the shortest route may be used, but the entrance by South Channel is not recommended after dark or in poor visibility.

The depths in the entrance range from over 55m in the entrance to about 28m in the center of the bay.

Manila Harbor is reported to give a good radar return up to 25 miles.

Manila Bay is in the middle stages of a 15 year major port development project.

Winds—Weather.—The Northeast Monsoon blows strongly out of Manila Bay, at times accompanied by a smoke-like cloud which is driven out of the bay southwestward and forms an arch on the SW horizon; the sky is otherwise clear.

Occasionally, sea breezes from the SW blow into the bay in the Northeast Monsoon after midday, increasing in strength toward the head of the bay.

During the strength of the Northeast Monsoon, although the wind may be fresh in the entrance, it will frequently be moderate within the bay.

When the Northeast Monsoon begins to weaken in February, SE and E winds become more frequent in the Manila Bay area. These winds are the prevailing winds in March and April, but they gradually become less frequent in the next four months. In May SW winds increase, and in August about 0.7 percent of all winds blow from between S and W.

During the Southwest Monsoon, storms, known locally as *Collas*, blow from SW to the W and are accompanied by violent squalls and a great deal of rain.

Colas occur most frequently in June or July and they often last for several days. When strong N or NW winds are prevalent there are no land winds.

Tides—Currents.—The tidal currents in South Channel are always semi-diurnal and may attain a rate of one knot at springs. The ebb sets in a 240° direction. The maximum rate occurs two hours after high and LW at Cebu.

The current velocities in North Channel are greater than those in South Channel and may attain a rate of 1.5 knots.

Tidal currents are negligible in the greater part of Manila Bay, but during the rainy season the Pasig River flows out with great velocity, and somewhat affects the water movement in the bay.

1.80 Mariveles Harbor (14°26'N., 120°29'E.), entered between Cochinos Point and Gorda Point, about 1.5 miles NE, provides good anchorage sheltered from all winds except those from SE. The NW portion of the harbor is the best typhoon anchorage in the Manila Bay area, but the anchorage is quite small and will not accommodate more than one or two large vessels.

Even with this haven from typhoons, Mariveles Harbor can prove dangerous because of the rotational qualities of the direction of this type of wind blowing into the entrance of the harbor.

The harbor is the quarantine station for Manila and a first port of entry. Storm signals are displayed at the quarantine station in Mariveles Harbor.

A reef, with a depth of 4m, lies about 0.2 mile ENE of Cochinos Point. A bank, with depths of less than 9m, extends 0.25 mile from the head of the harbor.

1.81 Mariveles (14°26'N., 120°29'E.) ([World Port Index No. 58390](#)) is a small town located near the NW shore of the bay. Close SW of the town, there are a number of prominent buildings which house the quarantine station for Manila. Vessels can enter the harbor with the T-shaped quarantine pier bearing 300°. A light is shown from a concrete tower, 11m high, situated 0.1 mile NNE of the Quarantine Pier.

In 1994 work was in progress in the harbor 0.7 mile E of the quarantine pier.

Depths—Limitations.—Marveles Pier: A concrete finger pier for handling general cargo, 15m long and 7.1m wide, with a depth of 5m and a 98m causeway.

Quarantine Pier: Also, a concrete finger pier with a depth of 6m and an 85m causeway. Talaga Wharf: A concrete wharf for handling general cargo, 33m long, 6m deep and a 177m long causeway.

There are two other concrete piers. One is for general cargo. It is 61m long, 3.6m wide and has a depth of 9m.

The second pier accommodates tankers. It is 366m long, 0.9m wide with a depth of 9m. A submarine pipeline 144.5m long extends to mooring buoys in 10.7m, allowing vessels of 70,000 dwt and a 244m loa to berth.

Pilotage.—Pilotage is compulsory for all vessels with a 24 hour advance notice given to the Chief Pilot, Manila Pilots Association.

Anchorage.—Vessels may anchor, in an area of good holding ground, in a depth of 25m, with the Quarantine Pier bearing 308°, or vessels may proceed farther into the bay if necessary. Near the harbor there are numerous wrecks, quarantine anchorages, and submarine cables.

Sisiman Bay (14°26'N., 120°31'E.), close E of Mariveles Harbor, is entered between Gorda Point and Aguawan Point, about 0.52 mile E.

A number of drying rocks lie close S of **Aguawan Point** (14°25'N., 120°32'E.). A shoal, with depths of less than 11m, extends 0.15 mile SSW from the point.

On the W side of Sisiman Bay there is a concrete wharf, 69m long, with a depth of 4.5m at the N end of it.

Two ruined piers are situated at Sisiman village in the NW corner of the bay.

1.82 Corregidor Island (14°23'N., 120°35'E.) is situated with Cape Corregidor, its W extremity, about 3 miles SE of Aguawan Point and is marked by a light on its summit. There is a signal station near the light. The W end of the island has three distinct peaks, the southernmost of which is 179m high. The E end of Corregidor is narrow and curves to the SE. The island is reported to give a good radar return up to 24 miles.

A reef on which stand some above and below-water rocks, with a depth of 5m over its outer edge, extends about 0.5 mile S from the E extremity of Corregidor Island. A dangerous wreck lies 1.25 miles NNE of Corregidor Island Light.



Corregidor Island Light

Caution.—Two prominent rocks, about 20 and 30m high, have been reported 0.2 mile W of Cape Corregidor.

La Monja Island (14°23'N., 120°31'E.), a rock, 37m high, lies 2.25 miles WSW of Cape Corregidor. A light is shown from a wooden platform on the summit of La Monja Island.

An obstruction is charted about 1.25 miles SE of this rock.

Caballo Island (14°22'N., 120°37'E.), narrow, rocky, and 116m high, lies about 1 mile S of the E extremity of Corregidor Island. A conspicuous radio tower stands about 0.1 mile E of the W end of the island.

The island is fringed with reefs, with depths of less than 6m, that extend about 0.75 mile WSW and 0.3 mile E of the island. A shoal, with a depth of 9.6m, lies 1.25 miles W of Caballo Island.

A channel between the reefs extending from the E extremity of Corregidor and Caballo Island is about 0.3 mile wide, with a least depth of 5.6m. The channel is buoyed, but not recommended for navigation.

San Jose Bay is located between Corregidor and Caballo Island. A ruined L-shaped pier stands in the NW corner of the bay.

Caballo Island is reported to give a good radar return up to 14 miles.

Corregidor Island, Caballo Island, and La Monja Island, including their surrounding waters and adjacent detached rocks, have been declared a military zone by the Philippine Government.

Vessels should not approach these islands closer than 1 mile, and vessels are not permitted to pass between La Monja Island and Corregidor Island.

1.83 Alasasin Point (14°25'N., 120°34'E.) is located 2.5 miles E of Gorda Point. The chart depicts two dangerous wrecks, with swept depths of 19.1m, lying about 1.25 miles and 2.75 miles E of Alasasin Point.

Lokanin Point (14°29'N., 120°36'E.) is located 4 miles NE of Alasasin Point. The intervening coast is composed of steep, rocky bluffs of moderate elevation, and fringed by a bank, with depths of less than 6m, extending 0.25 mile offshore. The 20m curve lies about 0.5 mile off the point.

A pier extends from the coast about 0.5 mile N of Lokanin Point. Two oil tanks are located close inland from the root of the pier. Range lights in line, bearing about 285.25°, are occasionally shown from the top of the oil tanks. The top of the oil tanks, but serve no purpose as the pier was reported (1994) to be in ruins.

Lamao Point (14°31'N., 120°37'E.), the N entrance point of the Lamao River, lies two miles N of Lokanin Point.

A stone causeway, 0.2 mile long, is located close N of Lamao Point. A T-head pier, reported to have a depth of 13.7m at its head, extends about 0.375 mile ENE from a position about 0.6 mile NNW of Lamao Point. A prominent gantry stands at the head of the pier.

A lighted mooring buoy, which marks the seaward end of a submarine oil pipeline, lies about 1.25 miles E of the head of the pier.

Luzon Point (14°32'N., 120°36'E.) lies about 1.5 miles N of Lamao Point. The Bataan Oil Refinery pier, with depths of 7 to 10.1m, extends about 0.3 mile E from Luzon Point.

A submarine pipeline extends about 0.4 mile from the end of the pier. Tankers with drafts of up to 15.8m can be accepted.

Depths—Limitations.—The refinery jetty is of open concrete pile construction extending 256m E from a solid causeway connection to shore. It provides berths on both sides, with a narrow basin dredged to 10.6m, for tankers up to 30,000 dwt.

A small basin, enclosed by breakwaters, lies on the S side of the root of the causeway. An LPG berth lying N/S, is situated on the seaward side of the S breakwater and has reported depths of 5.5m in the approach and at the berth. Vessels up to 64m in length and 700 dwt can be accepted.

An SBM (flashing light) is moored in a depth of 28.6m, 1.5 miles ESE of the jetty of Bataan Oil Refinery. A submarine oil pipeline runs W from the buoy to the shore.

Vessels up to 300,000 dwt can be accommodated.

Pilotage.—Pilotage is compulsory; the pilot, who comes from Limay, boards from a tug 2 miles E of Lokanin Point.

Tugs of up to 3,500 horsepower come from Manila; small tugs are available locally to assist with berthing.

The vessel's ETA should be sent four days in advance and confirmed 24 hours before arrival and should state any requirements. Bunker fuel and fresh water can be supplied by barge from Manila.

A conspicuous flare is occasionally visible at the refinery, about 0.4 mile W of the root of the jetty. There are many prominent oil tanks in the area between the T-headed jetty N of Lamao Point and the refinery.

Anchorage.—Anchorage is prohibited in the vicinity of the pipeline and tanker berth, but ships may anchor anywhere clear of the berth. Eight mooring buoys are grouped around the seaward end of the pipeline and form a mooring berth. Ships berth heading N.

1.84 Quitang Point (14°33'N., 120°36'E.) lies about 0.75 mile NNW of Luzon Point. A pier in ruins lies close N of the point. A number of oil tanks and a prominent industrial building with two tall chimneys are located W of Quitang Point.

A concrete pole, 9.7m high, stands on the N side of the entrance of the Limay River in a position about 1.25 miles NNW of Quitang Point.

Pandan Point (14°36'N., 120°35'E.) is located 3.25 miles N of Quitang Point. The coast is rather low and is fringed by a shoal, with depths of less than 6m, which extends from 0.4 mile offshore at Pandan Point to 1.75 miles offshore near the mouth of the Tiawir River, about 6 miles farther N.

Several wrecks lie between 0.75 mile and 1.75 miles off Pandan Point.

Pampanga Bay (14°47'N., 120°35'E.), which occupies the NW corner of Manila Bay, has depths of less than 6m. The Orani River and the Pasag River discharge into this bay.

The N and NE shores of Manila Bay are formed by the delta of the Pampanga River and the deltas of other large rivers. The shore is low and marshy. A shoal, with depths of less than 9m, extends 2 to 4 miles offshore.

A light is shown on the E side of the entrance to the **Pugad River** (14°45.6'N., 120°44.5'E.), located 6 miles E of the entrance to the Pasag River.

A prominent white house stands 2.5 miles W of the light and a prominent white church, surmounted by a white cross, stands 3 miles E of it.

Manila Bay—East Side

1.85 Limit Point (14°14'N., 120°35'E.) marks the S side of the outer limit of Manila Bay. The point is rocky, steep-to, and about 67m high.

Limbones Island, 98m high, small and rocky, lies close N of Limit Point.

Limbones Cove (14°14'N., 120°37'E.) is entered between Limbones Island and Carabao Island. The cove indents the coast as far as 2 miles in a SSE direction. The cove is open to the NW and clear of dangers.

Calungpang Point (14°16'N., 120°38'E.), marked by a light, lies 3.5 miles NE of Limit Point. The coast between these points is high and cliffy. A 2.4m patch lies 0.25 mile N of the point.

Restinga Point (14°17'N., 120°39'E.) is located 2.5 miles ENE of Calungpang point. The coast between is high and cliffy. A light is shown from the E entrance point of a bay, 1.5 miles E of Restinga Point. Two mooring buoys are situated 0.4 mile NW of the light.

Carabao Island (14°16'N., 120°37'E.), 56m high and rocky, lies 0.4 mile offshore about 1 mile W of Calungpang Point.

A dumping ground for metals is situated 4 miles W of Carabao Island.

El Fraile Island (14°18'N., 120°38'E.), a rock on which stands a fort and other buildings, lies about 2 miles N of Calungpang Point. A light is shown from the fort. A coral patch, with a depth of 12.8m, lies 0.25 mile E of the rock.

El Fraile Island, Carabao Island, and Limbones Island, including their surrounding waters and adjacent detached rocks, have been declared a military zone by the Philippine Government. Vessels should not approach these islands closer than 1 mile.

1.86 Maragondon Point (14°19'N., 120°44'E.) is located about 6.5 miles ENE of Calungpang Point. A detached shoal, with a depth of 5.5m, lies 2 miles N of Maragondon Point.

The Maragondon River entrance, about 2 miles S of Maragondon Point, is the E limit of the high land on the S side of Manila Bay. The shore between the river entrance and Sangley Point, about 17 miles NE, is low and marshy.

A shoal, with depths of less than 6m, extends up to 1.5 miles offshore along this stretch of coast.

San Nicolas Shoals (14°26'N., 120°46'E.) extend 4.5 miles offshore from a position about midway between Maragondon Point and Sangley Point. The outer shoal, with a least depth of 3.1m, lies about 7.5 miles NNE of Maragondon Point. It is steep-to on its W and N sides.

A shoal, with depths of less than 6m, extends between the outer shoal and the coast to the SE.

San Nicolas Shoals Light (14°26.3'N., 120°45.8'E.) is shown at an elevation of 11m on the NW extremity of the shoals.

A number of charted wrecks and obstructions lie within 3.5 miles and 7 miles NE of the light. A dangerous wreck lies 3 miles WNW of the light.

Rosario (14°25'N., 120°51'E.) is located about 9 miles NE of Maragondon Point. The Filoil refinery sea berth is located in a position about 2 miles off the shore of Rosario, Province of Cavite. The sea berth tanker mooring is situated in a depth of 13.7m. It is connected with a submarine pipeline to the refinery, and there is communications from the sea berth with the refinery.

When mooring at Filoil sea berth, both anchors are required to be ready, but normally only the starboard is used. The vessel approaches the mooring heading due S, and when secured is heading WSW, with the starboard anchor laid out, and the vessel moored to one buoy on the port bow and four or five buoys astern.

Mooring is carried out in daylight only, and should begin not later than 1200; but unmooring can take place at anytime. Three tugs are available for mooring; two are available for unmooring.

Pilotage.—Pilotage is compulsory and ETA should be sent at least 72 hours in advance. The pilot boards at the **Manila Quarantine Anchorage** (14°33'N., 120°56'E.). Filoil operates a private port radio station.

It is imperative that vessels moored at the berth be in good condition to clear the berth immediately in case of an emergency. Vessel's engines and gears must be ready with full power for immediate use.

Ships personnel should be at their stations at all times during mooring, unmooring, and cargo unloading operations.

1.87 Cavite (14°29'N., 120°54'E.) ([World Port Index No. 58360](#)) is located on the low N part of the peninsula extending in a NE direction from the S shore of Manila Bay.

Sangley Point (14°30'N., 120°55'E.) is the NE extremity of the peninsula. It is marked by an aeronautical light that is reported to be difficult to distinguish from the background of shore lights. The point, which is reported to be radar prominent, can also be identified by two 35m red and white checked water towers. A conspicuous church with twin white spires stands near the coast 2.5 miles SW of Sangley Point.

A red and green checkered metal tower, 21m high, stands on the E part of the peninsula forming the Philippine Naval Base. A conspicuous white monument stands near the root of this peninsula, 1.25 miles SW of Sangley Point.

Cavite Harbor is located S of a line extending in a 090° direction from a position 0.5 mile N of Sangley Point to the coast close N of **Paranaque** (14°30'N., 121°00'E.).

Cavite, a low peninsula located about 0.75 mile S of Sangley Point, extends about 1 mile E from the main peninsula.

Canacao Bay lies between the S side of Sangley Point and the N side of Cavite. An area on the N side of Cavite, near the base of the peninsula, is being reclaimed.

A shoal, with a depth of 3m, lies close SE of Sangley Point. Another shoal, with a least depth of 4.2m, lies about 1.1 miles NE of Sangley Point. Two piles stand 0.5 mile SE of the point.

Several mooring buoys, numerous other buoys, dolphins, obstructions, and wrecks lies off Sangley Point and in Canacao Bay as can best be seen from the area chart.

The deepest portion of Canacao Bay is near the N side, just S of Sangley Point, with depths of 5.2 to 7.6m.

Bacoor Bay, entered between the E end of Cavite and the mouth of the Imus River, about 1.25 miles S, is shallow and

under reclamation. There is also reclamation extending 0.8 mile out from the coast between Bacoor Bay NE to Pasay City.

Numerous fish traps have been reported between Sangley Point and Pasay City.

Anchorage.—An unrestricted anchorage area lies from 0.9 mile to 2.8 miles E of Sangley Point.

A designated anchorage may be obtained within the 5m sounding line with Sangley Point bearing 352°, distant 0.95 mile.

Directions.—Ships bound for Cavite Harbor should steer a course of about 141.5° for a distance of about 1 mile, from the position 1.5 miles N of Sangley Point Aeronautical Light, to a position with that structure bearing 222°, distant 0.9 mile. Then a course of 192° for 0.75 mile leads to a position about 0.3 mile E of Sangley Point. Vessels then can proceed on a WSW course to the assigned berths.

Caution.—Vessels are not permitted to berth within the limits of Cavite Harbor without prior permission, except through stress of weather or other urgent necessity.

In this case, vessels should anchor temporarily in an open berth, but are required to maintain power on the engines and be ready to move until such anchorage is confirmed or the vessel is directed to another berth.

Manila (14°35'N., 120°58'E.)

[World Port Index No. 58370](#)

1.88 Manila Harbor, located at the E end of Manila Bay, consists of North Harbor and South Harbor, both of which are protected by breakwaters. The two harbors are separated by the Pasig River.

The city of Manila, located on both sides of the Pasig River, is the principal port of the Philippines and a port of entry. Quezon City, NE of Manila, is the official capital.

Winds—Weather

From August to December, during the Southwest Monsoon, frequent sudden squalls occur in the afternoon.

Tides—Currents

Tidal currents in Manila Harbor are negligible. The ebb current from the Pasig River may flow with considerable velocity, especially during freshets.

Depths—Limitations

A bank, with depths of less than 5m, extends 1.25 miles W of the mouth of the Pasig River. West of this bank the depths increase gradually to about 10m, about 2 miles offshore.

The channel between the quarantine anchorage and the entrance to South Harbor is dredged to 11m. The N and S edges of the channel are defined by the light on the head of the West Breakwater and the light on the N head of the South Breakwater, each in line with the Customs House.

The South Harbor is the part of Manila Harbor that has an area of about 145 acres encompassing five finger piers

(numbered 3, 5, 9, 13, and 15 from N). They have a total berthing length of over 4331m, providing docking.

An additional 27 vessels can be accommodated at the anchorage. A barge point, capable of accommodating 30 barges or lighters, is also situated in the area a few meters across from Pier 3.

Greater depths alongside the South Harbor berths have been reported. Mariners are advised to consult the port authorities for confirmation.

Between the entrance to South Harbor and the piers, dredged depths of 10.5m have been reported. The obstructions in the approaches to the piers have all been reported to have been cleared.

An obstruction, with a swept depth of 7.6m, lies close to the N side of Pier 3. Another obstruction, with a swept depth of 7.9m, lies between Pier 9 and Pier 3, and a further obstruction, with a swept depth of 10.6m, lies close to the N side of Pier 15.

The North Harbor is the part of Manila Harbor that is located N of the entrance to the Pasig River. There are 8 main piers, with a total pier length of 4,000m, used mainly by coastal cargo and passenger vessels.

Eight piers, numbered 2 to 16 (even numbers only) project from the coast in North Harbor.

The area around Pier 12, Pier 14, and Pier 16 is foul. All eight piers are used for domestic traffic only. The controlling depths at the other 5 piers range from 1.2 to 6.7m.

The International Port Basin facility is situated on the W side of North Harbor and has been designed and developed to handle container traffic, breakbulk, and ro/ro vessels.

It is protected on its SE side by a breakwater extending 0.6 mile WNW from the NW corner of the reclaimed area S of Marginal Wharf, and on its NW side by a detached breakwater 0.5 mile in length. The entrance between the breakwater heads is 0.2 mile wide, and is marked on each side by a lighted beacon.

The basin provides four berths, each 250m long, at Marginal Wharf for container vessels, with full facilities including three 35-ton container cranes, and depths of 12.5 to 13m alongside.

Berth No. 5 has a depth of 14.5m, is 300m long, and is deeper than any of the existing berths. A tanker terminal available at the Port Basin, with only one berth has a length of 213.4m.

Night berthing is possible.

Aspect

South Harbor is formed by West Breakwater and South Breakwater. West Breakwater extends about 1.25 miles SSW from the W side of **Engineer Island** (14°36'N., 120°58'E.), a small artificial island lying on the S side of the entrance to the Pasig River.

South Breakwater lies with its NW extremity about 0.125 mile SE of the S extremity of West Breakwater and extends about 0.5 mile in a S direction.

The S entrance to South Harbor is about 1 mile wide between the SE extremity of South Breakwater and the N end of the western breakwater enclosing the Yacht Basin.

Numerous obstructions lie between the S entrance to South Harbor and the piers. The greater part of the bottom of South Harbor is foul.



Pasig River Light

Lights are shown from each end of South Breakwater, but are reported difficult to identify against the lights of Manila.

It has been reported that both N and S breakwater of South Harbor make good radar targets.

The **Pasig River** (14°36'N., 120°57'E.), which connects Manila with Laguna de Bay, a large fresh water lake lying SE of Manila, is entered N of a breakwater which curves about 1 mile SW from Engineer Island.

Marginal Wharf is the N face of a broad strip of reclaimed land extending 1 mile W from the N entrance point of the Pasig River.

Numerous wrecks and obstructions lie in the seaward approaches to the Pasig River.

Pasig River Light is shown from reclaimed land on the N bank of the river entrance, 0.1 mile NNW of Engineer Island.

North Harbor, located N of the entrance to the Pasig River, is protected from the W by North Breakwater. This breakwater, which is submerged at its outer end, extends about 1 mile NNW from the root of **Marginal Wharf** (14°36'N., 120°57'E.). A buoy is moored 0.35 mile NW of the NW extremity of North Breakwater. A light is shown from the head of North Breakwater.

A prominent tower, with a large white clock, stands on the Customs House, located about 1.1 miles NE of the head of West Breakwater.

The dome of Manila Cathedral, located about 0.45 mile NE of the Customs House is prominent.

A conspicuous tank, 28m high, and two radio towers, are situated 3.5 miles N of the Customs House.

Pilotage

Pilotage is compulsory for all merchant vessels anchoring or securing to a mooring buoy within the breakwaters, or when proceeding to and from the piers in the harbor or in the Pasig River.

All vessels should await the representative of the Immigration Authority in the quarantine anchorage. The pilot boards at the completion of the inspection, if vessels are proceeding to one of the 26 anchorages inside the breakwater or to one of the piers.

Agents or owners of vessels calling at the port of Manila shall inform the Pilot of their vessel's arrival. Agents can contact the Pilots Association through VHF channel 16, 24 hours a day, including Sundays and Holidays. Pilots are available day and night.

Regulations

All merchant vessels entering Manila Bay are required to display their colors and signal their official numbers or letters when within signal distance of **Corregidor Island** (14°23'N., 120°34'E.).

Signals

A vessel should display its official number or letters when approaching the quarantine anchorage in daylight. A vessel arriving at night must display her letters at daylight in addition to the Q flag. If the vessel is carrying mail, the Y flag should be displayed until delivery is effected.

Anchorage

Manila Bay, with an area of 770 square miles, provides sheltered anchorage for an unlimited number of vessels of all classes, in depths of from 15 to 40m, good holding ground.

Loading or discharging of cargo in the anchorages outside the breakwater of Manila Harbor is impracticable during strong S winds.

Within an area enclosed by the breakwaters, there are numerous anchorage berths (Anchorage A), with depths of from 5 to 11.5m. There are also a number of mooring buoys available. Berths are assigned by the harbormaster and permission must be obtained before anchoring or mooring.

A quarantine anchorage, mainly for the use of vessels entering South Harbor, is situated 2 miles SW of South Breakwater.

Several obstructions lie close W of the W limit of this anchorage. Pilots will board at this anchorage.

A second quarantine anchorage, mainly for the use by vessels entering the International Port Basin, is located N of the explosives anchorage and 2 miles W of the entrance to the International Port Basin.

Naval anchorages (Anchorage B) are located about 1 mile WSW of the S end of South Breakwater.

Fuel anchorages (Anchorage C) lie about 0.7 mile WNW of West Breakwater Head.

An explosive anchorage, with a radius of 0.5 mile, is situated about 3 miles WNW of West Breakwater head. Anchorage, due to the existence of submarine cables extending WSW from the Manila Yacht Basin South Breakwater, and from the shore about 1.25 miles S, is prohibited. The prohibited area broadens WSW to its W limit, which lies on the meridian of San Nicolas Light.

Anchorage is prohibited in an area S and SE of Corregidor and Caballo Islands.

Vessels entering or leaving the port of Manila are prohibited from remaining or anchoring at any place between the entrances to Manila Bay and the anchorages in Manila Harbor.

Directions

Vessels entering Manila Bay from S, upon arriving off Limbones Island, shall not bring **Caballo Island Summit** (14°22'N., 120°37'E.) to bear more than 056°, and in passing through South Channel shall keep the bearing of the summit less than 056°. The coast and all islands should not be approached within a distance of 1 mile. The same directions shall be followed by vessels leaving Manila Bay via South Channel.

Vessels entering Manila Bay from N via South Channel, upon arrival off **Hornos Point** (14°25'N., 120°28'E.), shall not bring El Fraile Island to bear more than 116°, until Caballo Island summit bears 056°, then the directions for South Channel should be followed.

Vessels entering through North Channel shall pass between La Monja Island and Guardia Shoal, and proceed through the middle of the channel between Corregidor Island and the mainland to the N. The same directions shall be followed by vessels leaving Manila Bay via this channel.

Caution

There are a number of sunken wrecks and other obstructions which lie in the immediate approaches to and within the harbor of Manila. It is best that vessels consult local authorities on depths in the harbor.

Several vessels have touched the bottom in recent years at the anchorage and in the approaches to the various piers.

Luzon—West Coast

1.89 Campanario Island (14°12'N., 120°35'E.), which is about 2 miles SSW of Limit Point, is small, 34m high, and lies close offshore. Another island, Cutad, 29m high, lies about 0.5 mile S of Campanario Island, about 0.2 mile offshore.

Hamilo Point (14°10'N., 120°34'E.), 37m high, lies about 1 mile SSW of Cutad Island. Hamilo Cove is entered between Cutad Island and Hamilo Point.

A detached shoal, with a depth of 10.1m, lies about 0.4 mile N of Hamilo Point. A narrow spit, with some prominent pinnacle rocks at its outer end, extends about 0.2 mile N from a

position on the S shore of the cove about 0.75 mile ENE of the W extremity of Hamilo Point.

A small basin lies about 1 mile E of the entrance to the cove. The basin is 0.5 mile wide at the entrance and 0.75 mile in extent. The shores of the basin are fringed with reefs. The head of the basin is shoal and fringed with mangroves. The central portion of the basin is deep and free of dangers.

Vessels, with local knowledge, can take anchorage in the N part of the basin, in depths of 10.9, mud.

Looc Cove (14°09'N., 120°35'E.) is the middle of three bays lying between Hamilo Point and Fuego Point. It indents the coast to a distance of about 1.5 miles in an E direction. It is about 0.75 mile wide. The shores of the cove are fairly steep-to, except at its head, where there is a sandy beach backed by trees. Depths of 9 to 16m are found about 0.4 to 0.3 mile from its head.

Two small islets, each about 27m high, lie off the entrance to Looc Cove, about 1.25 miles S of Hamilo Point. Foul ground lies between these islands and the point forming the S side of the entrance to Looc Cove.

Fuego Point (14°08'N., 120°34'E.) is high and rocky.

Two small islets, the outer of which is 28m high, lie close N of the point. A depth of 5.5m lies about 0.1 mile W of this outer islet.

Two small islets, covered with grass and about 10.6m high, lie about 1.25 miles SSE of Fuego Point. A reef, with a least depth of 0.6m, connects the two islets, and some rocks, awash, lie about 0.25 mile NE of the larger islet. A shoal, with a depth of 8.2m, lies about 0.2 mile S of the S islet.

Fortune Island (14°04'N., 120°29'E.), marked by a light on its summit, is small and narrow, but rises to 113m. The island is reported to give a good radar return up to 19 miles.

A small white sandy beach lies on the SE side of the island and a stranded wreck lies off this end of the island.

Simo Banks (14°05'N., 120°21'E.) are located from 5 miles NW to 12.5 miles W of Fortune Island. The W bank has a least depth of 11m. A small bank, with a least depth of 12.2m, lies about 8.75 miles WNW of Fortune Island.

The two E banks, lying 4 miles NW and 5.5 miles WNW of Fortune Island, have depths of 22m and 27m.

Nasugbu Bay (14°04'N., 120°36'E.) is entered between Fuego Point and San Diego Point, 6.75 miles further SSE.

The coast between Fuego Point and Nasugbu Point, which is 3.75 miles S of Fuego Point, is high and wooded.

The remaining coast of the bay, between Nasugbu Point and San Diego Point, is low, sandy, wooded, and steep-to.

A submarine cable runs W off Nasugbu Point.

The Wawa River and the Lian River, each of which has a bar with depths of less than 0.6m, flow into the bay close E of Nasugbu Point and 1.75 miles NNE of San Diego Point.

Twin prominent white chimneys stand 2 miles ESE of the entrance to the Lian River.

Pillar Rock, 8m high, is a prominent pinnacle rock, lying about 0.1 mile W of Nasugbu Point. A rocky shoal, with a least depth of 0.5m, coral, and marked by a buoy, lies 0.4 mile SSW of Pillar Rock. A rock, awash, stands about 0.3 mile NNW of Pillar Rock.

1.90 Nasugbu (14°05'N., 120°37'E.) ([World Port Index No. 58350](#)) is a small town standing about 0.25 mile inland

between the mouths of the Wawa and Lian rivers. It is important as a sugar loading port.

Anchorage.—Vessels can take anchorage during the Northeast Monsoon, in 11 to 13m, about 0.5 mile offshore and S of the 0.5m shoal lying 0.4 mile SSW of Pillar Rock. Small vessels with local knowledge can anchor between the reef and Nasugbu Point.

Vessels calling to load sugar sometimes anchor about 1.5 miles S of Nasugbu Point, in a depth of 9.1m. These anchorages are not considered safe during the Southwest Monsoon.

Talin Bay (13°59'N., 120°37'E.) is entered between San Diego Point and Talin Point, about 3.25 miles SSW. The bay indents the coast about 1.5 miles in a SE direction.

Talin Bay is open to the NW and is for the most part foul. The shores consist of alternate rocky cliffs and sandy beaches.

Talin Point (13°59'N., 120°36'E.) is about 61m high, and rocky. The point is the N termination of a small peninsula which extends about 1.25 miles NNW from the coast. Some sparsely wooded pyramidal hills rise to a height of 85m, about 0.75 mile SSE of the point.

Talin Point is fringed by a reef about 0.1 mile wide. A narrow shoal, with depths of less than 6m, extends about 0.5 mile NNW from the point.

Mount San Pedrino (13°55'N., 120°41'E.), 360m high, is located about 5.75 miles SE of Talin Point.

Caution.—It has been reported that from the NW, Talin Point gives the appearance of being an island, both visually and on radar.

1.91 Calatagan Point (13°49'N., 120°37'E.) is located about 10 miles S of Talin Point. The coast between is fringed by a drying reef, which extends in places as far as 1.5 miles offshore. There are numerous shoals lying up to 2.5 miles offshore along this stretch of coast which is low, sandy, and covered with mangroves.



Cape Santiago Light

A beacon stands on the edge of the shore reef about 2.25 miles NNW of Calatagan Point.

A strong NE set has been reported about 5.5 miles WNW of Calatagan Point.

Calatagan Inlet (13°49'N., 120°38'E.) is entered close N of Calatagan Point. It is about 0.1 mile wide between the drying reefs extending from the shore. Depths of 7m are found in the entrance and 2m near its head.

Cape Santiago(13°46'N., 120°39'E.), the SW extremity of Luzon, is 3.25 miles SE of Calatagan Point and is reported to give a good radar return up to 15 miles.

A light marks a low rocky promontory about 0.5 mile WNW of the S extremity of the cape.

Cape Santiago is 91 to 116m high, wooded, and fringed by a drying reef extending 0.1 mile offshore. There are depths of from 7 to 9m at the edge of the reef, increasing steeply to more than 91m about 0.5 mile offshore.

A conspicuous windmill stands about 0.4 mile ESE of the lighthouse.

Caution.—Heavy offshore squalls occur in the channel between the SW coast of Luzon and the **Lubang Islands** (13°47'N., 120°10'E.), primarily during the night and early morning.